

# Sous le Haut Patronage de Sa Majesté le Roi Mohammed VI



# تحت الرعاية السامية لجلالة الملك محمد السادس



# الطب البنيزيائي في خدمة ذرى الإعاقة PRMserving disability

# THE INFORMATIONS ABOUT 13TH CONGRESS OF MFPRM IN MARRAKECH, MOROCCO (Prepared by Dr Hafid MELIANI)

The 13th Congress of Mediterranean Forum of PRM was organized and hosted by the Moroccan PRM Society . It was held between the 7th and 10th November 2020 in Marrakech.

The ISPRM was represented by its President Prof. Walter FRONTERA and by its Vice President Dr. Francesca Gimigliano whilst the ESPRM was represented by its President Prof. Nicolas Christodoulou . Most of Mediterranean societies's Presidents was present amongst others .Officials from different ministries, disabled association's representatives,WHO local representative ...

The Congress was well organized . Marrakech and congress venue was particularly appreciated .

With around 500 participants from 35 countries from all over the world mainly from Mediterranean and European countries but also including participation from other African countries(Congo ,Niger,Senegal ,Gambia,Sudan ),as well as from Asia ( Japan ,Korea , Philippine ...), South America ,USA and Australia .

The theme of the Congress was "PRM serving disability". Presentations treated all rehab fields and pointed on how community medicine can participate in rehab care.

A significant number of invited speakers was present at the Congress including top European rehabilitation speakers, North africa and middle east speakers . There were also specially invited speakers from the USA namely Prof Walter Frontera , Atul PATEL .

# The detailed information of Marrakech MFPRM Congress is as follows:

1- The number of participants according to the countries:

| Nationality          | Nbre |
|----------------------|------|
| Algeria              | 16   |
| Australia            | 2    |
| Austria              | 2    |
| Belgium              | 4    |
| Bosnia & Herzegovina | 3    |
| Congo                | 1    |
| Croatia              | 10   |
| Egypt                | 5    |
| France               | 36   |
| Gambia               | 2    |
| Germany              | 4    |
| Greece               | 10   |
| Israel               | 3    |
| Italy                | 14   |
| Japan                | 3    |
| Jordan               | 5    |
| South Korea          | 4    |
| Kuwait               | 1    |

| Nationality              | Nbre |
|--------------------------|------|
| Malta                    | 3    |
| Mexico                   | 3    |
| Morocco                  | 171  |
| Niger                    | 1    |
| Phillipines              | 1    |
| Portugal                 | 37   |
| Republic of Montenegro   | 5    |
| Romania                  | 15   |
| Serbia                   | 42   |
| Slovenia                 | 3    |
| Senegal                  | 1    |
| Spain                    | 32   |
| Sudan                    | 02   |
| Switzerland              | 3    |
| Tunisia                  | 15   |
| Turkey                   | 12   |
| United Kingdom           | 3    |
| United States of America | 5    |
| Total                    | 479  |

# 2- The number of participants according to the professions:

| Total  | 479 |
|--|-----|
| Others non-medical persons                                     | 31  |
| Student/PRM Trainees   | 45  |
| PRM Physicians   | 376 |
| Neuroogist, Neurosurgeons Orthopedic surgeons & others doctors | 15  |
| Allied Health Profession                                       | 12  |

# 3- A very rich scientific program;

10 Pleinary ,40 Invited conferences ,(45 invited speakers including board members), 107 Oral communications treating most rehab topics.

# 22 Workshops:

- -12 Long WS, (02 hours), 05 for spasticity managment
- 10 Short WS (01 hour), practice and interactif
- 06 special sessions.

# 126 Eposters

68 Abstracts was not accepted.

**45 invited speakers** together with 8 Executive Board invited speakers ,Pr Cirillo was absent.

**4-**During the Congress the **new Executive Board** was elected for two years.

The new Executive Board Committee is as follows:

President: Milica LAZOVIC (Serbia)

Vice President: Khalil ABBADI (Jordan)

Secretary: Ilker YZGCI (Turkey) Treasurer: Calogero Foti (Italy)

Members: Hafid MELIANI (Morocco), Iuly Treger (Israel), Klemen Grabljevec(Croatia)

The next MFPRM Congress was also confirmed at Aman Jordan in 2021 whilst Roma Italy was selected to host the Congress in 2023.

We are very excited for upcoming Congress!

# Abstract: 22 - Date: 2019-04-12 11:36:22am

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# **Topic of Summary**

PRM in orthopaedics and musculoskeletal disorders

# **Title of Summary**

Ultrasound guided versus blind subacromial corticosteroid and local anaesthetic injection in the treatment of subacromial impingement syndrome: a study of efficacy

### **Keywords**

shoulder impingement syndrome; steroids; ultrasound; injections; intraarticular

#### **Authors**

Selin Ozen; Nejibeh Akbari; Murat Haberal; Nuri Cetin

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# Introduction

A prospective randomized uncontrolled open study to compare ultrasound (US)-guided versus blind subacromial corticosteroid injection in the treatment of subacromial impingement syndrome (SIS) in terms of clinical improvement in pain and functionality.

### **Materials & Methods**

29 patients with clinical findings and magnetic resonance imaging consistent with SIS were randomized into 2 groups; 15 patients received US guided subacromial steroid plus local anaesthetic injection (methyl prednisolone acetate 40mg in 1ml and procaine 2% 4ml) and 14 patients received a blind injection. Patients were evaluated before and one month after treatment. The primary outcome measure was a visual analogue scale (VAS) for pain. Secondary outcomes included active shoulder range of motion (ROM) in flexion and abduction, Disability of the Arm, Shoulder, Hand (DASH) and the Constant-Murley score. All patients were assessed before and four weeks following the intervention.

### Results

There was a significant reduction in VAS for pain, active shoulder ROM, and DASH in both groups four weeks post treatment (p<0.05). There was no between group difference. Constant Murley scores improved in both groups four weeks after treatment (p<0.05). Even though there was a greater improvement in Constant Murley scores in the US guided group four weeks post treatment (p=0.02), there was no difference in the between – group mean change in score (p=0.95).

# Discussion

#### Conclusion

Blind and ultrasound guided intra articular corticosteroid injections are equally effective in improving pain, ROM and functionality in SIS. In an era where the economic burden of healthcare is high on the agenda, we believe that clinicians can opt for blind steroid injection in the treatment of SIS with good effect.

#### References

# Abstract: 42 - Date: 2019-06-01 19:37:36pm

#### Name

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# **Topic of Summary**

Robotics, virtual reality and innovatives techniques in PRM

# **Title of Summary**

Robot-assisted gait training vs. conventional therapy in caregiver burden after stroke: a randomized study of an in-patient rehabilitation clinic

#### **Keywords**

Caregivers; depression; inpatients; rehabilitation; stroke.

#### **Authors**

Mehmet Akif Guler; Belgin Erhan; Ebru Yılmaz Yalcınkaya

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# Introduction

The purpose of this study was to evaluate caregiver burden of the stroke survivors during inpatient rehabilitation period and to compare the effects of robot-assisted gait training and conventional therapy on burden of the caregivers.

#### **Materials & Methods**

This was a randomised, crossover prospective design study. Sixty-three stroke survivors and their caregivers enrolled to the study and the stroke survivors randomly assigned into two groups. The patients in the first group had robot assisted gait training for 2 weeks then conventional therapy for the following 2 weeks, the patients in the second group treated with conventional and then robot assisted gait training for the same period. Caregiver burden inventory (CBI), Beck Depression Index, Beck Hopelessness Scale was administered to the caregivers at baseline (0.day), switch day (15.day) and end of the rehabilitation (30.day).

# Results

Before in-patient rehabilitation 18 (35%) of the caregivers were above normal scores of CBI, however at the end of rehabilitation 42 (66.6%) of the caregivers were in high burden and needed respite or other services. CBI scores changed significantly at the end of rehabilitation in both groups.

#### **Discussion**

#### Conclusion

Caregiver burden of the stroke survivors increase during in-patient rehabilitation period. Robot-assisted gait training seems to increase the burden slightly lower compared to the conventional therapy.

#### References

# Abstract: 47 - Date: 2019-06-18 18:41:30pm

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# **Topic of Summary**

PRM Education research and management in the mediterranean countries

#### Title of Summary

Effect of biological therapeutics on functional status and disease activity among Croatian patients with rheumatoid arthritis

# Keywords

rheumatoid arthritis-disease activity-functional disability-biologic therapy-conventional disease modifying drug

#### **Authors**

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#### Introduction

Rheumatoid arthritis (RA) is a chronic inflammatory joint disease that can lead to osteoarticular destruction. The goals of treatment of RA are not only symptom relief, but also improvement in disease activity and physical functioning. RA therapy include conventional

synthetic (csDMARDs) or biological disease-modifying drugs (bDMARDs). The aim of this study was to assess physical disability and disease activity in RA patients treated with bDMARDs as opposed to those treated with csDMARDs.

#### **Materials & Methods**

Seventy-seven RA patients (group A=29 on bDMARDs, group B= 48 on csDMARDs) were enrolled in the study. Biologic therapy included: TNF inhibitors (adalimumab (7), etanercept (7), infliksimab (4), golimumab (2), certolizumab (2)), interleukin-6 inhibitors (tocilizumab (5)), and interleukin-17-inhibitors (secukinumab (2)). Functional status was evaluated using Health Assessment Questionnaire (HAQ) and disease activity using Disease ActivityScore28C-reactive protein (DAS28CRP). Statistical analyses were done using XLSTAT 2019.1.2.57072 program.

#### Results

There was no statistically significant difference regarding RA activity using DAS28CRP (3.51 vrs 3.54, p=0.56) between groups A and B. However, we have found that HAQ was statistically significantly higher in group A in comparison with group B (1.19 vrs 1.07, p=0.018), as well as the duration of RA (6.25vrs 3.75 years, p=0.0006).

#### **Discussion**

#### Conclusion

These findings suggest that the inclusion of bDMARDs in the treatment regimen was overdue, with RA already advancing with developed functional disability, which prevented the achievement of the primary goals of treatment: low disease activity or remission and functional improvement.

#### References

# Abstract: 54 - Date: 2019-06-23 08:41:37am

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#### **Topic of Summary**

Neurorehabilitation, spasticity

### **Title of Summary**

Case report: one new case of Parkinson's disease with concurrent myasthenia gravis in Greece. A rehabilitation challenge.

#### Keywords

parkinson's disease, myasthenia gravis, comorbidity, rehabilitation

#### **Authors**

Eirini Mouza, PRM Doctor, Medical Director, Chrysanthi Ntasiopoulou, PRM Doctor; Sokratis Sgoutzakos, PRM Doctor; Dionysia Delaporta, Neurologist

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#### Introduction

There have been very few reports of Parkinson's disease (PD) coexisting with myasthenia gravis (MG) worldwide (15 since 1987 based on international literature). Our goal is to report a new case of concurrent parkinson's disease with myasthenia gravis and identify the sequence of the rehabilitation challenges emerging from the cascade of serious debilitating complications and side effects in this unique patient.

#### **Materials & Methods**

: Case presentation: We would like to report the case of a 74 year old man who was diagnosed as suffering from PD 6 years ago (2013), in the age of 68 presenting with resting tremor especially of the right hand, rigidity, postural instability and bradykinesia and 4 years later (2017) was diagnosed with Myasthenia Gravis (severe ptosis, double vision, difficulty chewing and swallowing, generalized muscle weakness, increased level of serum anticholinergic antibodies and negative for Thymus pathology Chest CT Scan). The patient suffered from a series of serious complications: deep venous thrombosis, multiple vertebral osteoporotic fractures, vertebral infection following vertebroplasty accompanied by lower extremities neurologic compromise and many more.

#### Results

The rehabilitation team work, based on cooperation among numerous medical professionals, came across multiple challenges during long lasting treatment and functional rehabilitation process back to patient\'s mobility and independence.

#### **Discussion**

#### Conclusion

The need for further studies and research on the relevance and comorbidity of PD with MG is emphasized as well as increased awareness in the assessment of new symptoms. The challenges are great for the neurological investigation as well as the rehabilitation process.

#### References

We are sincerely thankful to the patient for the detailed history and overall contribution.

# Abstract: 57 - Date: 2019-06-23 13:38:57pm

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### **Topic of Summary**

PRM in paediatric problems

# **Title of Summary**

Study of the link between dental malocclusions and idiopathic scoliosis.

### **Keywords**

dental malocclusion, idiopathic scoliosis, dental growth, vertebral growth, postural disorders.

#### **Authors**

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#### Introduction

The aim of this work is to find a link between dental malocclusions and idiopathic scoliosis.

#### **Materials & Methods**

We conducted a cross-sectional, case-control study of 62 patients included for three months in 2018 at the spinal deformity consultation.\r\nAmong them 31 patients are scoliotic and 31 are non scoliotic. An oral examination was done by dentists looking for dental malocclusions.

# Results

The mean age is  $12.98 \pm 3.34$  with a sex ratio (F / M) of 2.64. In scoliosis group, the mean age is  $13.48 \pm 3.64$  with a sex ratio of 6.75; the non scoliotic group has a mean age of  $12.48 \pm 2.98$  with a sex ratio of 1.38.lr The OR is 3.38, CI (1.18-9.70) with p 0.021, by stratifying on sex, the difference is significant in girls p 0.031 with OR 4.75, IC (1.31-17.11).\r\nThe etiological frequency in the population (FE pop) is 50%, IC (18.68-81.32), the FEe in patients with dental malocclusion is 70.45%, IC (15.26-89.7).

# **Discussion**

# Conclusion

In our study, it appears that subjects with dental malocclusion are 3.38 times more likely to be scoliosis, this risk is higher and reaches 4.75 in girls.\r\nFifty percent (50%) of scoliosis cases are attributable to dental malocclusion, and 70.45% of scoliosis cases are attributable to dental malocclusion in this latter population.1-

#### References

1- Ambra Michelotti, Gerarda Buonocore, Paolo Manzo, Gioacchino Pellegrino, Mauro Farella. Dental occlusion and posture: an overview. Progress in Orthodontics .Volume 12, Issue 1, May 2011, Pages 53-58\r\n2- Matteo Saccucci, Lucia Tettamanti, Stefano Mummolo, Antonella Polimeni, Felice Festa, Vincenzo Salini and Simona Tecco. Scoliosis and dental

occlusion: a review of the literature. Scoliosis 2011, 6:15\r\n3- Trobisch P, Suess O, Schwab F: Idiopathic Scoliosis. Dtsch Arztebl Int. 2010, 107: 875-884.\r\n\r\nhttps://doi.org/10.1016/j.pio.2010.09.010

# Abstract: 59 - Date: 2019-06-23 17:28:16pm

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# **Topic of Summary**

Special body function problems e.g. spasticity, urinary system, sexuality, dysphagia, speech disorders and others

### **Title of Summary**

Sexuels dysfonction in spinal cord injury

#### **Keywords**

Spinal cord injury, sexuals dysfonction, Cotonou

#### **Authors**

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Service de Médecine Physique et Réadaptation, CNHU-HKM de Cotonou

# Introduction

Spinal cord injury

# **Materials & Methods**

Prospective study

# Results

33 patients were enrolled

# **Discussion**

# Conclusion

Spinal

# References

No one

# Abstract: 62 - Date: 2019-06-24 08:55:57am

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# **Topic of Summary**

PRM in orthopaedics and musculoskeletal disorders

# **Title of Summary**

THE IMPORTANCE OF CLINICAL PARAMETERS IN EVALUATING EARLY OUTCOME IN PATIENTS WITH ONE LEVEL MICRODISCECTOMY-IMMEDIATELY POSTOPERATIVELY AND WITHINE THREE MONTHS AFTER SURGERY

# Keywords

lumbar microdiscectomy, rehabilitation

#### **Authors**

Tatjana Medic;Andjela Milovanovic;Veselin Medic;Tatjana Radovanovic;Slavica Rajevic;Branka Mladenovic; Sanja Tomanovic Vujadinovic

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# Introduction

To show the effect of operative treatment of lumbar disc herniation on clinical parameters preoperative, immediately postoperatively and within a period of three months after surgery.

#### **Materials & Methods**

Prospective Clinical study included 50 patientswith one level lumbar microdiscectomy. Clinical parameters: pain, mobility of lumbosacral spine, Lazarevic\'s (Lasegue) sign, strength of muscles, sensitivity, were tested preoperatively, on discharge, after a month and after three months of operation and conducted secondary rehabilitation.

#### Results

Study included 50 patients, average age 41,4 years, 24 (48%) were female, 26 (52%) male. Median intensity of pain was on VAS 40 preoperatively, and 10 on all three remaining measurements. The painintensity is statistically significantly higher preoperatively in relation to all three measurements after surgery (p <0.001). The lumbar spine mobility expressed through the Shober test statistically significantly increases postoperatively. The incidence of the positive Lazarevic\'s(Lasegue) sign was 92% preoperatively, 70% on discharge, 52% in the first, and 32% at the second control. The difference is statistically significant among all measurements. Strength of peroneal and tibialmuclesstatistically significantly increases in time. The frequency of sensitive disorder was 78% preoperatively, 60% on discharge, 56% on the first and 54% at the second control. The difference is statistically significant between the preoperative measurement and on discharge (0.035).

# Discussion

#### Conclusion

\r\nThe biggest early benefit after operated lumbar disc hernia is the release, or significant reduction of the intensity of pain, the improvement of sensitivity, as well as the reduction in the frequency of the positive Lazarevic\'s (Lasegue) sign.\r\n\r\n\r\n

#### References

# Abstract: 64 - Date: 2019-06-24 10:14:25am

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# **Topic of Summary**

PRM in orthopaedics and musculoskeletal disorders

#### **Title of Summary**

Inflammation - indicator of the upcoming of venous thromboembolism in the hip and knee surgery

# Keywords

the parameters of inflammation ,venous thromboembolism , hip and knee surgery

#### **Authors**

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#### **Affiliations**

Clinic for Physical Medicine and Rehabilitation, Clinical Center of Serbia, Belgrade, University of Belgrade, School of Medicine

# Introduction

The aim of this paper is to point to the parameters of inflammation as predictors of venous thromboembolism in hip and knee surgery.

# **Materials & Methods**

In the period of three years was performed study of 100 patients, who were hospitalized at the Clinic for Orthopedic Surgery and Traumatology, Clinical Center of Serbia, and had surgery of the hip and knee (50 in the knee region, 50 in the hip region). CRP and fibrinogen were monitored as predictors of venous thromboembolism.

# **Results**

Inflammation is a very serious indicator of upcoming complications.\r\nOf the total of 100 patients in the hip and knee region, in 25 suspected patients a complete diagnostic was performed in order to confirm TDV and PE.\r\nOf the susceptible 25 patients, 9 were with complications. Patients who had postoperatively developed complications had an increased CRP preoperatively, significantly increased inflammation preoperatively. Significant CRP values were observed in patients who had surgery of the hip (17.8%) compared to patients who had surgery of the knee (6.5%). The difference is statistically significant p <0.001.\r\nIncreasing the value of CRP and fibrinogen preoperatively, significantly suggests greater chances of adverse outcome. They have a predictive value. \r\n

#### Discussion

#### Conclusion

By applying recommendations for diagnostic and treatment of acute and chronic venous disease we can contribute that at least reduce high risk of VTE in patients operated of the hip and knee. \r\n\r\n

#### References

# Abstract: 66 - Date: 2019-06-25 05:03:57am

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# **Topic of Summary**

Neurorehabilitation, spasticity

#### **Title of Summary**

Muscle mode changes bewteen different functional level of stroke patients

#### **Keywords**

stroke, muscle mode, different functional level

# Authors

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#### **Affiliations**

Muscle mode changes bewteen different functional level of stroke patients; Muscle mode changes bewteen different functional level of stroke patients

# Introduction

Functional recovery after stroke is nonlinear. The functional recovery varies according to onset, lesion of location and area of brain damage. The purpose of this study is to compare the non-linear recovery pattern of muscle function and the muscle activation mechanism according to the level of functional recovery with stroke.

# **Materials & Methods**

29 stroke patients participated in this study. Participants were divided into three groups according to their functional level. Group1 was able to maintaining sitting posture(n = 7), Group2 was independently able to do sit-to-stand(n = 10). Group3 was able to gait without any aid (n = 12). Subjects were asked to perform the Anetrior/Posterior sway operation 15 times for analysis of muscle mode. The AP sway operation provides real time visual feedback, so that it can be repeated 70% of the maximum AP sway motion. 12 muscle data(6 pairs) were collected on the affected and unaffected muscles of pectoralis major, lower trapezius, rectus abdominis, erector spinae lumbar, external oblique and Internal oblique.

Principal component analysis (PCA) analysis was performed using collected EMG signals to define muscle mode.

#### Results

PCA analysis defined two muscle modes for G1, and three muscle modes for G2 and G3. Also It was confirmed that the muscle composition constituting each PC was different between the groups.

#### Discussion

#### Conclusion

Different level of stroke patients had different functional level. The results showed that different level of functional movement between the groups may be explained by different muscle mode

#### References

This study was supported by a grand(NRCTR-IN19005) of the Translational Research Center for Rehabilitation Robots, Korea National Rehabilitation Center, Ministry of Health & Welfare, Korea.

# Abstract: 68 - Date: 2019-06-25 11:13:28am

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# **Topic of Summary**

Neurorehabilitation, spasticity

#### **Title of Summary**

Spasticity rehabilitation in patients with stroke in therapy with botulinum toxin

# Keywords

spastiity, stroke

#### **Authors**

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#### Introduction

Our objective is to monitoring the spasticity evolution after toxinum botulinum injection in upper limb after stroke.

#### Materials & Methods

Our study included 54 patients with ischemic and hemorrhagic stroke for upper limb rehabilitation treated with 500 U Dysport. The injection was sonography guided in targeted muscles. The trargeted musle were teres pronator, flexum digitorum profundus and superficialis, and also in same cases biceps brachialis and triceps brachialis. The maximum dose was 500 U Dysport: 200 Biceps Brachialis, 150 Flexorum digitorum, 150 Teres pronator. All patients were monitories using modified Ashworth and Tardieu scale for spasticity, and Franchay and ADL (Activity of Daily Living) scale for functional ability. The evaluation was performed initially and after three months. All patients received an adapted program of neurorehabilitation, which consist in special electrotherapy- shockwaves, galvanic currents, and electro stimulation in palsy muscles.

#### Results

The spasticity decrease from 3.2 to 2.4 for Ashworth scale with improving results in Tardieu scale considerable. Functional ability increase daily activity after combination therapy. The functionality was measured by Franchay and ADL scale.

#### Discussion

#### Conclusion

Spasticity decrease in patients in very good way for functionality, in fact this is the main purpose when the combination therapy is applied.

#### References

# Abstract: 74 - Date: 2019-06-26 10:28:15am

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# **Topic of Summary**

PRM in paediatric problems

# **Title of Summary**

Proximal Focal Femur Deficiency: are we still taking baby-steps?

# Keywords

congenital femoral deficiency; proximal femoral; paediatric rehabilitation

#### **Authors**

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#### Introduction

Proximal focal femoral deficiency (PFFD) is part of a spectrum of congenital deformities affecting the femur, more comprehensively named congenital femoral deficiency (CFD) — incidence of 1 in 50,000 births. Treatment is complex and nearly all patients with PFFD will require some combination of surgical and orthotic treatment. The aim of this study is to emphasize the challenge of adapting orthotic treatment in very young children, during first stages of walking development.

#### **Materials & Methods**

We report a case of a 14 months-old infant with a prenatal diagnosis of CFD. He presents a 6 cm shortening of the right leg, with normal range of motion (ROM) of the ipsilateral hip, knee and ankle. He has already good sitting balance and tries to achieve standing position but the limb asymmetry leads to a vicious position of constant compensatory flexion of the left leg.

#### Results

At this point, the patient is learning to stand up and has a height compensation shoe. However, this compensation is no longer effective. According to the orthopedic team, there is no surgical indication before the age of four. The rehabilitation team decided to build serial orthotics to accompany the growth rate.

#### **Discussion**

#### Conclusion

The principal goal of bracing is to establish a stable weight-bearing extremity and may require 'non-standard' or unconventional braces produced to accommodate the shortened and deformed thigh. Follow-up by Physical Medicine and Rehabilitation is essential, as well as the frequent updating of orthoses to enable the child to develop the most adequate, physiological gait possible.

#### References

# Abstract: 78 - Date: 2019-06-26 11:12:05am

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# **Topic of Summary**

Neurorehabilitation, spasticity

# **Title of Summary**

Comparison of treatment effects between children with spastic cerbral palsy under and over five years after Botulinium toxin Type A injection

#### **Keywords**

#### **Authors**

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#### Introduction

The aim of our study was to evaluate whether age influences a change in the spasticity after BTA injection in children with spastic cerebral palsy (CP).

#### **Materials & Methods**

Twenty nine children with spastic CP were enrolled in the study. Nine children (group 1) were under 5 years of age, and twenty (group 2) were over 5 years of age. They all received BTA injection in the legs. The clinical data collected were age, sex, the topographical clinical form of CP and the type of walking pattern according to that established by Rodda and Graham. Modified Ashworth Scale (MAS) and Gross Motor Function Classification System (GMFCS) were evaluated at baseline (pre-injection) and 6-month post-injection.

#### Results

The average age of children was  $4.9 \pm 2$ ;1 years and the sex ratio was 2,2. Diplegia was the most common type of CP (57,7%) and true equinus (45%) was the most type of walking pattern. Most of children were classified as Level I (31%) and II (41.4%) according to the GMFCS. In both groups, the mean MAS was significantly improved after injection. The change in the MAS and GMFCS between baseline and 6-month post-injection in group 1 was greater than that in group 2.

#### Discussion

# Conclusion

Our study demonstrated the different changes in spasticity after BTA injection based on age. Therefore, age may be considered when establishing a treatment plan using BTA injection for children with spastic CP.

#### References

# Abstract: 79 - Date: 2019-06-26 11:20:12am

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# **Topic of Summary**

Residents and young PRM in the Mediterranean countries

# **Title of Summary**

Comparison of intra-articular injections of hyaluronic acid and hyaluronic acid plus corticosteroid in the treatment of hip osteoarthritis with Kellgren Lawrence degree greater or equal than II: pilot study.

# Keywords

Corticosteroids, Hyaluronic acid, Kellgren Lawrence (K-L) scale, Intra-articular injections, Osteoarthritis, VAS score.

#### **Authors**

Faraci S. MD; Foti C. MD.

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Department of Physical Medicine and Rehabilitation, Clinical Sciences and Translational Medicine, Tor Vergata University, Rome, Italy.

#### Introduction

The hip is one of the most affected joint by Osteoarthritis (OA). The purpose of the study was to evaluate the therapeutic effect of intra-articular injections of hyaluronic acid (HA) in comparison to HA plus corticosteroid (CS) ancillary component (triamcinolone hexacetonide).

#### **Materials & Methods**

We recruited 12 patients, 6 by gender, treated since 2014 to 2019, affected of hip OA with Kellgren Lawrence radiological degree ≥ II. They were divided in two groups followed for one month after intra-articular injection of HA (4 ml)(group 1) or HA+CS (4 ml)(group 2). Trough VAS scale were assessed the pain at baseline (T0) and after one month (T1). We analyzed the statistical significance using T-student test and the effectiveness of therapy.

#### Results

Average VAS score-T0 was 66,67±17,74 and -T1 was 32,08±26,91 (T-test 0,0181), showing a good improving on pain. We analyzed average VAS score-T0 (74±19,50) and -T1 (53±22,81), with T-test 0,0182 in the 5 patients treated with HA injections, and T-test 0,0017 in the 7 patients treated with HA+CS injections (T0 61,43±15,74; T1 17,14±18,90). Effectiveness of therapy was assessed, reaching 28,38% after HA injections unlike 72,09% after HA+CS injections.

### **Discussion**

#### Conclusion

Initial results suggest that HA+CS injections permit to obtain better results in term of decreasing pain in first month after treatment and linked-reducing of VAS score compared with HA injections. The efficacy is clearly superior in this group too. This work is a pilot study, the data of other functional scales are omitted because they are still being processed.

# References

# Abstract: 79 - Date: 2019-06-26 11:20:12am

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# **Topic of Summary**

Residents and young PRM in the Mediterranean countries

#### **Title of Summary**

Comparison of intra-articular injections of hyaluronic acid and hyaluronic acid plus corticosteroid in the treatment of hip osteoarthritis with Kellgren Lawrence degree greater or equal than II: pilot study.

# Keywords

Corticosteroids, Hyaluronic acid, Kellgren Lawrence (K-L) scale, Intra-articular injections, Osteoarthritis, VAS score.

#### **Authors**

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Department of Physical Medicine and Rehabilitation, Clinical Sciences and Translational Medicine, Tor Vergata University, Rome, Italy.

# Introduction

The hip is one of the most affected joint by Osteoarthritis (OA). The purpose of the study was to evaluate the therapeutic effect of intra-articular injections of hyaluronic acid (HA) in comparison to HA plus corticosteroid (CS) ancillary component (triamcinolone hexacetonide).

#### **Materials & Methods**

We recruited 12 patients, 6 by gender, treated since 2014 to 2019, affected of hip OA with Kellgren Lawrence radiological degree ≥ II. They were divided in two groups followed for one month after intra-articular injection of HA (4 ml)(group 1) or HA+CS (4 ml)(group 2). Trough VAS scale were assessed the pain at baseline (T0) and after one month (T1). We analyzed the statistical significance using T-student test and the effectiveness of therapy.

#### Results

Average VAS score-T0 was 66,67±17,74 and -T1 was 32,08±26,91 (T-test 0,0181), showing a good improving on pain. We analyzed average VAS score-T0 (74±19,50) and -T1 (53±22,81), with T-test 0,0182 in the 5 patients treated with HA injections, and T-test 0,0017 in the 7 patients treated with HA+CS injections (T0 61,43±15,74; T1 17,14±18,90). Effectiveness of therapy was assessed, reaching 28,38% after HA injections unlike 72,09% after HA+CS injections.

# **Discussion**

#### Conclusion

Initial results suggest that HA+CS injections permit to obtain better results in term of decreasing pain in first month after treatment and linked-reducing of VAS score compared

with HA injections. The efficacy is clearly superior in this group too. This work is a pilot study, the data of other functional scales are omitted because they are still being processed.

#### References

# Abstract: 81 - Date: 2019-06-26 11:53:26am

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# **Topic of Summary**

PRM in geriatric conditions

#### **Title of Summary**

PAIN AND NUTRITION IN PHYSIOTHERAPY

### Keywords

Physiotherapy, pain, D vitamine, nutritional status

#### **Authors**

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#### Introduction

To assess the influence of a physiotherapy session on pain intensity and its relationship with nutritional status and D vitamin levels.

#### Materials & Methods

An observational, cross-sectional study was done for 84 patients treated in one day in the physiotherapy area. All patients were admitted to a Functional Recovery Unit. \r\nThe pain level was analyzed prior, at the end and three hours after the sesión of the physiotherapeutic treatment. To measure the pain, we used an Visual Analogic Scale (VAS) Numeric Verbal Scale (NVA) and PAINAD scale according to the patient\'s comorbility (visual impairment, motor coordination, dementia ...)\r\nNutritional status and D Vitamin levels were determined by blood test. \r\nEpidemiological and clinical data of the patient were registered.\r\nThe statistical analysis was carried out using the SPSS program v.21.\r\n

# Results

The pain level was 3.1 + 3.5 before treatment and 2.90 + 3.4 at the end. Three hours after treatment, the pain value was 2.1 + 2.7, significantly lower than the initial one (p <0.05). \r\nIn those patients with D vitamin deficiency, the pain level was higher than in those with normal levels, without differences by sex or diagnosis.\r\nIn malnourished patients, the pain value was lower than in patients without criteria of malnutrition p<0.01.\r\nThe improvement in pain was greater in amputees than in neurological and trauma patients.\r\n

#### Discussion

#### Conclusion

Physiotherapy treatment decrease the pain level specially three hours after treatment.\r\nDeficient levels of D vitamin are associated with higher pain level.\r\nPatients with malnutrition have less pain.\r\n

#### References

The authors wish to thank the Virgen de la Poveda Hospital management for allowing us to carry out the study and to staff and patients for their cooperation.

# Abstract: 84 - Date: 2019-06-26 15:44:42pm

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# **Topic of Summary**

PRM Education research and management in the mediterranean countries

# **Title of Summary**

Reality of school sport participation: A cross-sectional study in urban Tunisian students

#### **Keywords**

School sport, extracurricular sport, student

# **Authors**

Saoussen Layouni1; Islem Megdiche1; Sahbi Elmtawa2; Emna Toulgui1; Moncer Rihab1; Walid Ouannes1; Faycal Khachnaoui1; Sonia Jemni1

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#### Introduction

The health benefits of increased levels of physical activity are widely established, including decreased risk for disease and improved mental well-being. The aim of this study was to determine student's perceptions of school sports and their opportunities of an extracurricular sports practice

### **Materials & Methods**

A cross-sectional study was conducted in three primary school and three high school during one month (October 2018). Data were collected by self-reported questionnaires

# Results

One thousand one hundred and twenty nine Tunisian students (555 boys, 574 girls), aged 10-16 years old (11,7+/- 3,84) were presents at the data collection and completed all the questionnaire. school sport is practiced by 92.5% students with a median of one hour per

week and a real duration of 40 minutes but 36% of students are not satisfied with the quality of the session. On the other hand, 51.1% practiced an extracurricular sport. Football had the highest prevalence rate (16.7%). the median of duration was 1h [1-1.3]. A statistically significant relationship between socio-economic level and extracurricular sport practice (p <0.001), also positive associations between physical activity and academic achievement among students (p <0.001). The academic activity does not deprive the practice of extracurricular sport with p=0.11.

#### **Discussion**

#### Conclusion

Participation in school sports and physical education during childhood and adolescence are frequently mentioned as factors likely to promote more active lifestyles in adulthood. If this is true, public policy should more vigorously promote broad participation in school sports and physical education.

#### References

# Abstract: 85 - Date: 2019-06-26 16:05:37pm

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### **Topic of Summary**

PRM Education research and management in the mediterranean countries

#### **Title of Summary**

Relationships between school sport and academic performances

# Keywords

school sport, academic performances, student

# **Authors**

Saoussen Layouni1; Islem Megdiche1; Sahbi Elmtawa2; Emna Toulgui1; Moncer Rihab1; Walid Ouannes1; Faycal Khachnaoui1; Sonia Jemni1

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1-University hospital center Sahloul Tunisia, Department of Physical Medicine and Rehabilitation; 2-University hospital center Ibn El Jazzar Kairouan Tunisia, Department of Physical Medicine and Rehabilitation

### Introduction

Opportunities for children to be physically active during school time are sparse and becoming\r\nincreasingly so. Our intent in this study is to assess the effects on academic performances of school\r\nPhysical activity programmes in middle school students and primary school.

#### Materials & Methods

A cross-sectional study was conducted in three primary school and three high school during one\r\nmonth (October 2018). Data (Age, school physical activity, hours per week of school sport and\r\nAcademic Outcomes school) were collected by self-reported questionnaires.

### Results

One thousand one hundred and twenty nine tunisian students (555 boys, 574 girls), aged 10–16 years old (11,7 $\pm$ 3,84) were presents at the data collection and completed all the questionnaire. Median of Annual average was 14 [11,51-15,97] in group who practice school sport. The statistical correlation indicate positive associations between physical activity involvement and academic achievement among students (p< <10 $^{-3}$ )

#### **Discussion**

#### Conclusion

Practice of a physical activity by children would deserve being largely encouraged, taking into account its beneficial effects not only on health, but also on academic performances. Parents and teachers, as well as health professionals, should be strongly informed.

#### References

# Abstract: 86 - Date: 2019-06-26 21:13:41pm

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# **Topic of Summary**

PRM in orthopaedics and musculoskeletal disorders

#### **Title of Summary**

Estimation of fracture risk factors in patients with low bone mineral density

# Keywords

osteoporosis, osteopenia, fracture risk factors, fractures, FRAX

#### **Authors**

Snezana Tomasevic-Todorovic<sup>1</sup>; Spasojevic T<sup>1</sup>; Boskovic K<sup>1</sup>; Knezevic A<sup>1</sup>; Pantelinac S<sup>1</sup>; Hanna F. <sup>2</sup>

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<sup>1</sup>University of Novi Sad, Faculty of Medicine, Clinical Center of Vojvodina, Clinic for Medical Rehabilitation, Novi Sad, Serbia; Public Health Program, Department of Health Sciences, Torrens University Australia, Melbourne Australia.

# Introduction

to estimate risk factors for the emergence of fractures and to estimatebone mineral density.

#### **Materials & Methods**

Our cross-sectional study included 160 patients (80 with osteoporosis, 80 with osteopenia), who received treatment at the Medical Rehabilitation Clinic, Clinical Center of Vojvodina in Novi Sad. The data were based on questionnaire, as well as measurements of the bone mineral density (BMD) by DXA method, and the assessment of the fracture risk by FRAX index.

#### Results

The average BMD and T- score of the lumbar spine ( L1-L4)was: (OP) group -BMD=  $0.815 \pm 0.094$ ; T score= -3.04  $\pm 0.81$ ; Osteopenia -BMD= $0.8551 \pm 0.0932$ ; T score=-1.4  $\pm 0.81$ . The average BMD and T- score of the femur (neck) was :OP group - BMD=  $0.6906 \pm 0.0913$ ; T score=-2,42  $\pm 0,99$ , Osteopenia group- BMD=  $0.803 \pm 0.091$ ; T -score=  $0.855 \pm 0.093$ . Results showed that statistically significant differences were established in representation of specific fracture risks between the patients with osteoporosis and osteopenia, in particular, weight, (p=0.05),previous fractures and family history of hip fractures (p=0.01). The mean FRAX risk of major fracture was :OP -12.48  $\pm 6.43$ , Osteopenia - 10.25  $\pm 6.30$ ), and for hip fracture was OP-  $4.92 \pm 3.90$  Osteopenia-3.67  $\pm 3.97$ ).

#### **Discussion**

#### Conclusion

The most important fracture risk factors in patients with low BMD were the existence of earlier fractures, family history of hip fracture and low body weight.

#### References

# Abstract: 92 - Date: 2019-06-27 16:07:02pm

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# **Topic of Summary**

PRM Education research and management in the mediterranean countries

#### **Title of Summary**

Knowledge of Autonomic Dysreflexia in the Emergency Department: a local perspective

#### **Keywords**

Autonomic dysreflexia; education; emergency medicine

#### **Authors**

Eloise Agius Anastasi; Andrei Agius Anastasi; Mary Rose Cassar

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Mater Dei Hospital, Malta

### Introduction

Autonomic dysreflexia (AD) carries significant risks to any patient with a history of spinal cord injury at T6 or above, yet knowledge pertaining to its salient clinical features and appropriate management is still scarce (Jackson et al, EMJ 2011; 28: 823-823). To this end, an audit investigating the knowledge of AD amongst emergency physicians working in Malta was conducted

#### **Materials & Methods**

A questionnaire validated by Jackson et al, (2011) to investigate knowledge of AD amongst doctors in New Zealand, was replicated for our local cohort. Questionnaires were filled-in by emergency physicians of different grades working within Mater Dei Hospital, Malta, without allowing for any aids (like phones, internet or colleagues). Results were subsequently calculated and analysed further using SPSS.

#### Results

Thirty-one emergency physicians ranging from basic (7) to higher (19) specialist trainees and resident specialists (5) were included. 63% were aware of the fact that spinal cord injury was the main risk factor for autonomic dysreflexia with 15% also knowing the correct level of injury needed. An accurate definition was obtained by 6%, with 21-40% getting a partially-correct answer. Averages scores on questions related to clinical features, precipitants, management and complications were comparable to Jackson et al. but showed significantly higher scores in more senior physicians locally.

### **Discussion**

# Conclusion

Local emergency physicians demonstrate a moderate level of knowledge related to autonomic dysreflexia, with senior doctors exhibiting higher clinical acumen. Caveats in the

knowledge revealed by our audit will be used to promote educational material and awareness across the board.

#### References

# Abstract: 96 - Date: 2019-06-27 19:43:14pm

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#### **Topic of Summary**

PRM in orthopaedics and musculoskeletal disorders

# **Title of Summary**

Physiotherapy in Lateral elbow tendinopathy

# **Keywords**

#### **Authors**

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#### **Affiliations**

Unidade Local de Saúde de Matosinhos, Centro de Saúde de Abel Salazar; Centro Hospitalar Vila Nova de Gaia e Espinho

#### Introduction

To evaluate the impact of physiotherapy in Lateral elbow tendinopathy in patients from Abel Salazar Health Unit, a public primary care unit in Portugal.

#### **Materials & Methods**

Survey with multiple choice and short-answer questions to patients with informatic codification of L93 "Tennis elbow" (International Classification of Primary Care, 2nd version) and imagiologic lateral elbow tendinopathy.

### Results

A total of 101 patients were identified, from those 26 met the inclusion criteria and answer the survey.\r\nPhysiotherapy greatly improved symptoms in 57,7% (15/26) of patients. In 26.9% (7/26) there was a complete resolution of pain, after an average of 2 physical therapy cycles. In 11.5% (3/26), patients did not felt improvements at all. The benefit of physiotherapy lasted more than 6 months in 65.4% of patients (17/26). There was no difference between patients that started treatment before 6 months of symptoms and those that started after.

# **Discussion**

# Conclusion

Currently, there is no consensus on the Lateral elbow tendinopathy's ideal treatment. In our study, physiotherapy had lasting positive effects independently of the duration of the symptoms at the start of the treatment.

#### References

# Abstract: 98 - Date: 2019-06-27 20:53:24pm

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#### **Topic of Summary**

PRM in paediatric problems

#### **Title of Summary**

Isolated Radial Nerve Palsy in the Newborn

#### **Keywords**

#### **Authors**

Joana Romano; Mariana Agre; Raquel Costa

# **Affiliations**

Unidade Local de Saúde de Matosinhos, Porto, Portugal.

#### Introduction

To review the differential diagnosis between radial nerve palsy and brachial plexus lesion in the newborn.

#### **Materials & Methods**

We describe a case of congenital radial nerve palsy and summarize the clinical features that differentiate it from a brachial plexus lesion.

# Results

Isolated radial nerve palsy, as well as brachial plexus lesion, presents with wrist drop and absent digital extension. However, in peripheric radial nerve palsy we can observe preserved shoulder and elbow function and normal wrist and digital flexion. Characteristic skin changes proximal to the lateral epicondyle, in the radial nerve course, are frequently found in congenital radial nerve palsy, and support the diagnosis.

#### **Discussion**

# Conclusion

The combination of shared risk factors with brachial plexus lesion, the difficulty in the newborn physical examination and radial nerve palsy's quick resolution surely lead to many overlooked or misdiagnosed cases. Even though congenital radial nerve palsy is a rare

pathology its identification is important since it has a better prognosis that seems to be independent of how severe the presentation was.

#### References

# Abstract: 103 - Date: 2019-06-28 10:13:21am

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# **Topic of Summary**

Neurorehabilitation, spasticity

#### **Title of Summary**

Paraparesis after spinal anesthesia during delivery

# Keywords

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Department of Rehabilitation, Galilee Medical Center, Nahariya, Israel\*; Reuth Medical & Rehabilitation Center, Tel-Aviv, Israel\*\*

#### Introduction

To describe two cases of spinal cord injury after spinal anaesthesia.

#### **Materials & Methods**

1. A 37-year-old female was admitted to rehabilitation with paraparesis, intractable pain and hypoesthesia under T9 level. She had undergone cesarean section under spinal anesthesia and the symptoms appeared a short-time after the operation. The MRI showed edema from D10 until the conus medullaris. \r\n2.A 42 year old woman was admitted to the rehabilitation department after spontaneous giving birth. After the epidural injection she developed paraparesis. Spinal MRI study did not show any signs of bleeding. A flaccid paraparesis was found below the level of L2. Hypoesthesia was noted over her right leg below L3 level.

#### Results

1. After 3 months of rehabilitation training, she was independent in the basic activities of daily living, walked with a rolling walker, and was able to use the stairs. Her SCIM was 84/100. \r\n2.

# **Discussion**

### Conclusion

The onset of the symptoms after cesarean section, the edema and the small medullary infarction seen in the MRI, support the theory that traumatic injury to the spinal cord during

anesthesia is secondary to either direct needle penetration or intra-neural injection of local anesthetics.

#### References

# Abstract: 105 - Date: 2019-06-28 12:02:04pm

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# **Topic of Summary**

Neurorehabilitation, spasticity

#### **Title of Summary**

Exercise prescription in myasthenia gravis

# Keywords

Exercise, myasthenia gravis

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# Introduction

Myasthenia gravis is an autoimmune disease caused by antibodies against components of the neuromuscular junction resulting in the cardinal symptoms of fluctuating muscle weakness and fatigability. As many myasthenia gravis patients have residual symptoms despite optimal treatment, interventions that can counteract them are important. Exercise seems to be a reasonable strategy considering these patients most common complaints of muscle weakness and functional limitations. However, currently no exercise protocol exists to inform healthcare professionals how to advise individuals with myasthenia gravis on exercise practice. The aim of this review is to gain an overview of what type of exercise is most adequate and safe among patients with myasthenia gravis. It pretends to answer the following questions: is exercise feasible among these patients? Is it safe? What exercise modalities seems to be more appropriate? What benefits can be expected?

#### **Materials & Methods**

This work is a narrative review that includes evidences about exercise prescription in myasthenia gravis. The sources used was Google Scholar, Pubmed e Elsevier. Clinical trials, case reports and literature reviews were included.

# **Results**

Supervised exercise improves strength, functional capacity and reduces fatigue. Aerobic, strength and balance training are beneficial and safe even at a sufficient intensity to induce

adaptations, at least among those with mild disease. The commonest reported adverse events were mild and transient and seem to be related with exercise intensity.

# Discussion

#### Conclusion

This review demonstrates that supervised exercise is feasible, safe and beneficial among patients with mild myasthenia gravis, having a positive impact in their most common complaints.

#### References

# Abstract: 108 - Date: 2019-06-28 14:45:59pm

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# **Topic of Summary**

PRM in paediatric problems

#### **Title of Summary**

FOP management in children's rehabilitation unit

### **Keywords**

Fibrodysplasia ossificans progressiva; paediatric problems; respiratory physiotherapy; occupational therapy

#### **Authors**

Dra María Díaz Gutiérrez; Dra Sofía Yoon; Dra Carmen Mateo Moratinos; Dr Jose Luis Pérez Pinilla; Dra Carmen María Pérez Aguiar ; Dra Milagros Yulimar Rivero

### **Affiliations**

Servicio de Rehabilitación, Hospital Universitario Nuestra Señora de la Candelaria, Tenerife, Spain

# Introduction

Know pathology, differential diagnosis and management within the Children's Rehabilitation Unit of a patient diagnosed with a patient with primary ossifying fibrodysplasia (FOP)

#### **Materials & Methods**

We present the case of a 4-year-old children in the follow-up and treatment in our Children's Rehabilitation Unit with a diagnosis of FOP with cervical thoracic lumbar, mandibular involvement and dysmetria of the lower extremities.\r\n\r\nFOP is an ultra-rare, severely disabling genetic disease characterized by congenital malformation of the great toes and progressive heterotopic ossification (HO) in muscles, tendons, ligaments, fascia, and

aponeuroses often preceded by painful, recurrent soft tissue swelling (flare-ups). The formation of HO leads to progressive disability, severe functional limitations in joint mobility, and to a shortened life-span.

#### Results

The patient is included in physiotherapy treatment in order to learn patterns of respiratory kinesiotherapy in order to maintain an adequate respiratory pattern, strengthen the musculature and train family members in the management of secretions.\r\nIn addition, treatment with occupational therapy is added to facilitate and promote the learning of motor skills, positioning and postural hygiene together with measures to improve the function of the upper extremities and feeding, and in this way, promote the child\'s autonomy and facilitate its normal adaptation in the school and family environment.

#### Discussion

#### Conclusion

Emphasize the importance of making a good diagnostic difference before alterations at the level of feet in newborns, since some alterations may be indicative of serious systemic pathologies. Give treatment options in these pathologies in order to improve the autonomy of these patients in all areas.

#### References

# Abstract: 111 - Date: 2019-06-28 15:59:21pm

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#### **Topic of Summary**

PRM in orthopaedics and musculoskeletal disorders

### **Title of Summary**

Gluteus maximus fibrosis, one case review

# Keywords

gluteal fibrosis, fibrosis

#### **Authors**

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### **Affiliations**

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# Introduction

The aim of this review is to build a specific rehabilitation program for patients affected of gluteal fibrosis that we can put into practice early on the detection of a new case.

#### Materials & Methods

The case of a 46-year-old male will be presented. He underwent surgery when he was 11 years old. The patient was sent to the rehabilitation service several years later, after having another surgical procedure in which a gluteus maximus tenotomy and a fascia Lata fasciectomy were performed.\r\nOn the first physical examination, the patient showed limitation to hip flexion while having his knees flexed on neutral position. He was also unable to reach the floor with his fingers when his knees were extended due to the fibrosis and the scar tissue.\r\n

#### Results

The patient referred an improvement of his previous condition after the surgery. After examination and review of image tests, hyaluronic acid viscosuplementation on the hips (due to osteoarthritis found on MRI) combined with physiotherapy was considered the best treatment option. \r\nAfter 40 sessions of physiotherapy with an individualized pattern according to his limitations, the patient showed good results. He referred a subjective improvement in the quality of the movement and achieved an objective improvement in the fingers-floor distance

#### Discussion

#### Conclusion

Given the previous exposed case, we can conclude that examination by a rehabilitation professional who can adapt the physiotherapy to each individual case after surgery and provide other treatments as well has proven to have multiple benefits for the patient.

#### References

# Abstract: 116 - Date: 2019-06-28 22:38:12pm

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# **Topic of Summary**

Special body function problems e.g. spasticity, urinary system, sexuality, dysphagia, speech disorders and others

# **Title of Summary**

urodynamic outcomes of urinary disorders in neurobehçet: about 07 cases

#### **Keywords**

urodynamic test, urinary disorders, neurobehçet

### Authors

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#### Introduction

The objective of this study is to analyse the urodynamic outcomes of urinary disorders in patients with neurobehçet in order to understand and manage them.

#### Materials & Methods

A retrospective study was conducted in our department during 02 years[2017-2019]. This study included seven patients with neurobehçet and urinary disorders that underwent an urodynamic assessment.

#### Results

The average age was 36,3 years [26 – 50]. There was a male predominance. The average duration of the evolution was 2 years, brain injury was predominant. \r\n4 patients reported Urge urinary Incontinence with Increased daytime frequency, 2 patients have Nocturia with dysuria and 1 patient had Mixed urinary incontinence with dysuria. \r\nUroflowmetry was normal in 2 patients, Dysuria was found in 5 patients (4 of them with Detrusor sphincter dysynergia) associated with a significant post-voiding residue.\r\nOn cystomanometry, 6 patients have a detrusor overactivity dangerous to the upper urinary tract associated with Urinary incontinence.\r\n3 patients have increased external sphincter activity.\r\n

#### Discussion

#### Conclusion

urinary disorders in neurobehcet are varied and require good management to avoid impact on the upper urinary tract.\r\nUrodynamic tests provide objective information regarding the abnormal function of the urinary tract and allows us to conduct the right treatment.\r\n

#### References

# Abstract: 118 - Date: 2019-06-29 08:14:48am

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# **Topic of Summary**

Neurorehabilitation, spasticity

# **Title of Summary**

Effects of non-invasive cerebral stimulation on post-stroke dysphagia: systematic review.

#### **Keywords**

Dysphagia; Post-stroke; Cerebral stimulation; Rehabilitation;

#### **Authors**

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#### Introduction

Introduction: Dysphagia can be divided into oropharyngeal and esophageal. Stroke is a representative cause of oropharyngeal, and in acute stroke, the prevalence of dysphagia has been reported as being between 37% and 78%. Post-stroke dysphagia is associated with increased mortality and morbidity. \r\nRecently, non-invasive brain stimulation techniques like transcranial magnetic stimulation and transcranial direct current stimulation, have started to attract attention. \r\n \r\nObjectives: To know, through a bibliographic review, the role of non-invasive cerebral stimulation in post-stroke dysphagia.

#### **Materials & Methods**

Bibliographic search using the search engines: Pubmed, Medline. Inclusion criteria: 1) metaanalyzes, systematic reviews and reviews; 2) Language: Portuguese, English and Spanish; 3) in humans; 4) Last 10 years.

#### Results

From all of the included studies, 55% of the participants were male. The average age was 57 years old. All patients had suffered a stroke, the majority of which were ischemic strokes. The time post-stroke varied greatly, from 24 h to 40 months. Some studies used clinical assessments and others used videofluoroscopy. \r\nOne of the most widely used scales in the field of dysphagia is the Penetration–Aspiration Scale. Another outcome measure was the functional dysphagia scale, although two versions were used. Finally, the dysphagia outcome severity scale, that indicates diet, independence level, and type of nutrition.

#### **Discussion**

#### Conclusion

There remain a lot of unanswered questions regarding the physiological mechanisms of NIBS and the nature of excitatory and inhibitory stimulation, which will require more extensive research. Further work assessing different stimulation sites, doses and effects on different types of patients are necessary.

# References

recommending timely operative treatment has confirmed its importance in the prevention of stroke.\r\n\r\n

#### References

# Abstract: 123 - Date: 2019-06-29 13:50:43pm

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# **Topic of Summary**

PRM in geriatric conditions

### **Title of Summary**

Retrospective Study of Elderly Inpatients with Pulmonary Tuberculosis Who Required Rehabilitative Medical Care

### **Keywords**

#### **Authors**

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#### Introduction

This study is aimed at investigating the activities of daily living (ADL) situation of hospitalized pulmonary tuberculosis (TB) patients who underwent a rehabilitation regimen at an urban acute care hospital in Japan.

# **Materials & Methods**

Single institution, retrospective cohort study of medical records from April 2013 to March 2017. Ninety-five cases (58 males, 37 females, mean age 76 years) were included in this study. Demographics, time from hospitalization until rehabilitation was requested, length of hospital stay, physical comorbidities, physical status data (Serum Alb, CRP, BMI), Barthel Index (BI), Functional Oral Intake Scale (FOIS), and ECOG performance status score (ECOG PSS) were examined. We divided the patients into two groups, "BI improvement" and "BI invariant", according to changes in BI scores at the beginning and end of rehabilitation regimen. A comparison between the two groups was performed.

# **Results**

Comparing the two groups, the BI invariant group contained 53 cases (57 %) of which 91% were elderly cases. The BI invariant group also contained many cases of had cancer comorbidities. The BI invariant group contained significant numbers of cases that did not have CRP negative changes or did not get improved serum albumin levels.

# **Discussion**

#### Conclusion

Aging, cancer comorbidities, persistent chronic inflammation, and persistent malnutrition were estimated to be major inhibitors of ADL improvement in hospitalized TB patients. Looking at these factors, it was suggested that active nutrition management is desirable for ADL maintenance for TB patients.

# Abstract: 124 - Date: 2019-06-29 14:48:02pm

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# **Topic of Summary**

Special body function problems e.g. spasticity, urinary system, sexuality, dysphagia, speech disorders and others

#### **Title of Summary**

Prevalence of sexual disorders in multiple sclerosis

#### Keywords

Sexual disorders; multiple sclerosis; prevalence

#### **Authors**

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#### Introduction

To determine the prevalence of sexual disorders in MS population in Casablanca.

# **Materials & Methods**

Retrospective, descriptive and analytical study of patients suffering from multiple sclerosis (MS) and treated in the department of physical medicine and rehabilitation from May 2018 to May 2019.\r\nThe assessment of these disorders was preformed using the IIEF-5 score for men and the FSFI-6 score for women.\r\n

# Results

45 patients were recruited. The average age was 37.5 +/- 10 ans with a female predominance (73.3%)\r\nThe average duration of the evolution was 6.2 +/-5 years.\r\n 60% of patients had the relapsing form while 22.2% had the progressive form. The average EDSS scale was of 5,3.\r\n55.5% of patients were married and most patients were sexually inactive. The prevalence of sexual disorders were 100% for male and 77% for female.\r\n

#### **Discussion**

# Conclusion

Sexual disorders exist in MS and require a good evaluation to ensure optimal care and to plan the life of these patients.

# Abstract: 125 - Date: 2019-06-29 14:48:39pm

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#### **Topic of Summary**

PRM in paediatric problems

## **Title of Summary**

Urodynamic outcomes in children with recurrent urinary tract infection

#### Keywords

urodynamic; recurrent urinary tract infection; children

## **Authors**

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#### Introduction

Urinary tract infection (UTI) is a frequent disorder of childhood. It is important to identify anatomic or functional urinary tract anomalies, causing recurrent infections. \r\nThe objective of this study is to analyse the urodynamic outcomes of children with reccurrent UTI.\r\n

## **Materials & Methods**

We conducted a retrospective review of medical records during 1 year. The patients were recruited at the department of Physical Medicine and Rehabilitation during the neuro-urology consult or were sent by pediatricians for urodynamic.

#### Results

Forty five children were recruited. The mean age was 7.93 [3 – 13], with a male predominance. 6 patients underwent surgery for myelomeningocele, and 6 others had posterior urethral valve. 5 patients had acute pyelonephritis. One patient had kidney failure and was treated by peritoneal dialysis. \r\nThe urodynamic findings included dysuria and significant post-void residual volume in 60%, small bladder capacity in 20% and detrusor overactivity in 66.6%.\r\n

#### Discussion

## Conclusion

Urodynamic study assesses objectively urinary tract dysfunction during UTI and allowes the right treatment in order to prevent kidney failure.

# Abstract: 127 - Date: 2019-06-29 16:04:02pm

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## **Topic of Summary**

PRM in geriatric conditions

### **Title of Summary**

Effectivness of stabilometric and vestibular rehabilitation to reduce risk of falls in elderlypoeple : a comparative study

## **Keywords**

vestibluar rehabilitation therapy; visual biofeedback rehabilitation, risk of fall.

#### **Authors**

Migaou H1., Layouni Saoussen1; Touil Darine2; Boudokhane .Soumaya1; Chouchen lbtissem2; Jellad Anis1; Ben Salah Frih Zohra1

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#### Introduction

Balance dysfunctions are a major source of death and injury in elderly people. The aim of this study was to compare the efficiency of two different methods for balance training: stabilometric platform and vestibular rehabilitation in ameliorating balance and reducing the risk of falls.

#### **Materials & Methods**

We have enrolled elderly patients with risk of falls randomly assigned to two groups A and B. Rehabilitation protocols are based on a 6 week cycle conventional physiotherapy associated for group A with stabilometric rehabilitation and for group B with vestibular rehabilitation therapy. The outcome measures used were Tinetti test and Timed Up and Go (TUG). Clinical and stabilometric assessment before and after a 6-week period of training were performed.

#### Results

Our study population consisted of 12 patients divided into two groups A and B: 6 patients for each group with 4 men and 2 women and an average age of 73.5 years [67 - 85].\r\nWe noted that tinetti test and TUG, improved in both groups with a gain respectively of 2.67 and 2.33 in stabilometric group, versus 1 and 1.36 in vestibluar rehabilitation therapy group. But the improvement was better for patients performing visual biofeedback rehabilitation.\r\n

#### Discussion

## Conclusion

Our results show that the and the vestibular rehabilitation therapy have the positive effect on balance dysfunction of elderly poeple, while stabilometric platform gets better results and significantly reduces the risk of falls

#### References

## Abstract: 129 - Date: 2019-06-29 16:35:29pm

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## **Topic of Summary**

PRM in orthopaedics and musculoskeletal disorders

#### Title of Summary

Foot self-care practices of Diabetic patients in Tunisia

## **Keywords**

diabetic foot, self care practices

#### **Authors**

Sghir Mouna; El Arem Soumaya; Haj Salah Aymen; Haddada Ikram; Maaoui Rim; Kessomtini Wassia

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CHU Taher Sfar Mahdia

## Introduction

Diabetic foot is a major health problem for people with diabetes mellitus. It can cause serious complications leading to lower extremity amputations. Furthermore, foot self-care practice is one of the most important self-management behaviors to prevent the ocurrence of diabetic foot ulcers. \r\nThe aim of this study was to identify foot self-care practices among diabetic patients in a Tunisian population.\r\n

#### **Materials & Methods**

A cross-sectional study was conducted over a period of 3 months. A self-prepared questionnaire was used to collect data from a sample size of 150 diabetic patients at Tahar Sfar hospital and Ezzahra primary care center in Mahdia.

## Results

The mean age of patients was  $56,91 \pm 12,6$  years with a range of 20 to 86 years. A low level of education was found in 76% of cases. In addition to diabetes, 41,4% of patients had a history of hypertension and 46% of them had hypercholesterolemia. Smoking was found in 13,3% of cases. Half of patients were using oral medications, 28% were using insulin therapy and 21,3% were using both oral and insulin therapies. Regarding patients\' knowledge of the diabetic foot, 74.7% had no idea about the impact of diabetes on the foot. Many errors in daily care practices were revealed.

#### Discussion

## Conclusion

Our patients have a low level of knowledge and a lack of education diabetic foot. It is therefore important to educate them to prevent serious complications of the diabetic foot.

#### References

## Abstract: 130 - Date: 2019-06-29 16:48:09pm

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## **Topic of Summary**

PRM in orthopaedics and musculoskeletal disorders

#### Title of Summary

Posterior shoulder pain revealing a "Pancoast-Tobias syndrome"

## **Keywords**

Pancoast-Tobias syndrome, shoulder pain

#### **Authors**

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## Introduction

The Pancoast-Tobias syndrome involves severe and unrelenting shoulder and arm pain along with the distribution of the eighth cervical and first and second thoracic nerve trunks, Horner's syndrome (ptosis, miosis, and anhidrosis), and atrophy of the intrinsic hand muscles.

## **Materials & Methods**

We report the case of a man followed in our physical and rehabilitation department for a posterior shoulder pain, and for whom a Pancoast-Tobias syndrome was diagnosed.

## Results

A 44-year-old man presented with a persistent right shoulder pain. He had no neck pain nor numbness in the fingers. On examination, he had normal active and passive motion of the shoulder. Cervical examination hadn't shown neck stiffness. X-Ray of the shoulder and the neck were normal. First electrophysiological examination was not conclusive. The patient presented, after 6 months, with a Claude Bernard Horner (CBH) syndrome. A chest X-ray was, then, requested, and it showed an apical opacity in the right apex of the lung. The diagnosis of Pancoast tumor was confirmed by CT scan and biopsy. Therapeutic decision was a preoperative chemotherapy followed by an extensive surgical approach. Postoperative period was marked by the appearance of a shoulder limitation, a neuropathic pain and a deficit of the upper limb. The clinical examination concluded to an adhesive capsulitis of the shoulder and a paralysis and hypoaesthesia C8-D1. Postoperative electrophysiological examination confirmed pathologic C8-D1 roots.

## Discussion

This case is an unusual presentation of "Pancoast-Tobias syndrome". It emphasizes the importance of its inclusion in the differential diagnosis of patients presenting with persistent shoulder pain.

#### References

none

# Abstract: 132 - Date: 2019-06-29 17:09:17pm

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## **Topic of Summary**

PRM in paediatric problems

## **Title of Summary**

A rare association of Osteogenesis Imperfecta and psychomotor retardation

#### **Keywords**

osteogenesis imperfecta, psychomotor retardation

## **Authors**

Sghir Mouna; El Arem Soumaya; Haj Salah Aymen; Haddada Ikram; Said Wafa; Ksibi Imène; Kessomtini Wassia

#### Affiliations

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#### Introduction

Osteogenesis Imperfecta (OI) Type III is the most severe type of OI among children who survive the neonatal period.

#### **Materials & Methods**

We report the case of a type III OI, followed in our department of Physical Medicine and Rehabilitation.

#### Results

R.F is a 2-year-old female child referred to our department for psychomotor retardation. She was issued from a consanguineous marriage. Her mother, 26 years, had no relevant medical or family history. At 20 weeks of amenorrhea, prenatal diagnosis of bone abnormality was done on morphological ultrasound examination. Amniocentesis was performed and hadn't shown karyotype abnormality. The child was born at term with a birth weight of 2200 g. She was hospitalized in neonatal department for a month, diagnosed with OI type III and received bisphosphonates. \r\nClinical examination in our department revealed a triangular face, bluegrey sclera and a "frog like position". Her level of motor evolution was estimated of 3 months. Inferior limbs X-ray showed progressive bone deforming. Her spine X-ray revealed a dorsal scoliosis. A seat corset as well as a Garchoix corset was Prescribed. \r\n

#### Discussion

#### Conclusion

Type III OI is a severe type, characterized by progressive bone deformations, blue sclera and triangular face. It is associated, in this case with a psychomotor retardation. This has made the management of such a case more difficult requiring multidisciplinary care.

#### References

none

# Abstract: 133 - Date: 2019-06-29 17:13:42pm

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#### **Topic of Summary**

PRM in orthopaedics and musculoskeletal disorders

#### **Title of Summary**

Contribution of sophrology in common cervicalgia

#### **Keywords**

Chronic common cervicalgia, dynamic relaxation, sophrology, mental relaxation, muscular relaxation, body-mind connectivity

#### **Authors**

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#### Introduction

Chronic common neck pain is one of the most common musculoskeletal diseases. The aim was to study the interest of the integration of a sophrology rehabilitation program in the rehabilitation of chronic common cervicalgia.

## **Materials & Methods**

A randomized single-blind comparative descriptive study was performed over a period of 1 month, of the order of 3 sessions per week, on 16 patients suffering from chronic common cervicalgia divided into two groups. Group A benefited from a conventional rehabilitation protocol and group B benefited from a sophrology protocol associated with conventional rehabilitation.\r\nThe parameters evaluated were: pain, articular mobility, proprioception, psychological profile and function.\r\n

## **Results**

We found a more marked improvement in pain, joint status, psychological state and function in group B.the decrease in EVA was on average 1.75 for group A and 3.5 for group B. Regarding proprioception, the average gain of centimeter distance between the center of the target and the luminous point was respectively in group A and B 1.75 and 3.62 cm. . For group A and group B, the average NDI score was 57.5% and 54% respectively in the initial balance sheet and in the final balance sheet of 44.5% and 26% respectively

#### **Discussion**

#### Conclusion

The sophrology technique can be an effective therapeutic method in the management of chronic common cervicalgia.

#### References

# Abstract: 134 - Date: 2019-06-29 17:26:48pm

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#### **Topic of Summary**

PRM Education research and management in the mediterranean countries

#### **Title of Summary**

Risk assessment of patients with diabetes for foot ulcers in a Tunisian population

## Keywords

foot ulcers, diabetics, Tunisian population

#### **Authors**

Sghir Mouna; El Arem Soumaya; Ben fredj Manel; El Fani Nedra; Kessomtini Wassia

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CHU Taher Sfar Mahdia

#### Introduction

diabetic foot is a major health problem for people with diabetes mellitus. It can cause serious complications leading to lower extremity amputations. The aim of this study was to determine the prevalence and risk factors of foot complications among diabetic patients in Mahdia, Tunisia.

#### **Materials & Methods**

Detail history and examination including neurological and vascular assessment were performed in 150 patients with diabetes mellitus attending Tahar Sfar hospital and Ezzahra primary care center in Mahdia. Foot at risk was classified according to the risk classification consensus of the International Working Group on the Diabetic Foot (IWGDF). The risk level was correlated with demographic and clinical features.

## **Results**

The mean age of patients was 56.91 ± 12.6 years with a range of 20 to 86 years. A low level of education was found in 76% of cases. Only 10% of diabetics had been screened for sensory neuropathy. \r\nForty-three per cent of patients were in group 0 of the IWGDF, 37% in group 1, 15.3% in group 2 and 4% in group 3. Patients in higher–risk groups had longer\r\ndiabetes duration (p=0.045).Risk of foot ulcers was higher in the presence of diabetic neuropathy (p=0.0001), retinopathy (p=0.000009) and nephropathy (p=0.02). Patient's BMI, smoking did not have significant correlation with risk of diabetic foot ulcer.\r\n

#### **Discussion**

#### Conclusion

Despite the low prevalence of foot ulceration and amputation among the study population, a substantial proportion had potential risk factors for foot complications.

#### References

none

## Abstract: 136 - Date: 2019-06-29 17:37:17pm

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#### **Topic of Summary**

Special therapeutic methods in PRM

## **Title of Summary**

Visualization technique and hypopressive abdominal gymnastics in postpartum pelvic reeducation

## Keywords

Stress Urinary Incontinence - GAH - Visualization-quality of life

#### **Authors**

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#### Introduction

Post partum stress urinary incontinence is a common pathology that alters the overall women\'s quality of life of with psychological, social and professional repercussions.\r\nThe objective of our study was to show the interest of Hypopressive Abdominal Gymnastics (HAG) and the visualization technique in the case of post partum urinary stress incontinence.\r\n

## **Materials & Methods**

This is a comparative descriptive study of patients followed for postpartum stress urinary incontinence who were divided into two groups of 10 patients. The first group A benefited from the classical perineal reeducation protocol and group B from the HAG and visualization method associated with the classical protocol. An evaluation of urinary incontinence (MHU), quality of life (Contilife) and function (Ditrovie) was performed before and after 1 month after rehabilitation.

#### Results

We found a more marked improvement of the different parameters in group B. Concerning MHU, the score decreased respectively from 13.2 to 4.4 in group A and from 11.2 to 1.4 in group B. For Contilife we noted a decrease in the parameters ( situation with the effort and self-image) especially in group B. According to the ditrovie score, all the patients of group B were little disturbed in their activity, their psychology and their sleep .

#### **Discussion**

## Conclusion

Although the sample was weak this work has shown the interest of HAG in postpartum urinary incontinence.

#### References

# Abstract: 138 - Date: 2019-06-29 17:43:16pm

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## **Topic of Summary**

Neurorehabilitation, spasticity

#### **Title of Summary**

The contribution of the concept of proprioceptive neuromuscular facilitation in Parkinson\'s patients

#### **Keywords**

parkinson-kabat-rehabilitation

## **Authors**

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## Introduction

Parkinson\'s disease is a neurodegenerative pathology that mainly affects people over 65 years of age. The place of rehabilitation at a beginning stage becomes more and more important The aim of the study was to look for the interest of the Kabat method in the early stages of the disease

#### **Materials & Methods**

This is a comparative study including 14 Parkinsonian patients divided into two groups, one following the classical protocol and the other the PNF concept. The parameters studied were akinesia, rigidity, balance and walking

#### Results

We found a marked improvement in motor skills, balance and walking in patients treated by PNF group. The UPDRS score remained almost the same in group A while this score decreased in group B (from 23 to 16.33). Akinesia decreased by 2.6 in group B and by 0.3 in group A). For patients in group A the initial Tinetti score was in the order of 22, at the end of rehabilitation it was 22.66. In group B, the gain is greater from 22.66 to 26.66, reflecting a decrease in the risk of falling

#### Discussion

#### Conclusion

Although the number of the sample was small, we concluded that the kabat method improved balance and walking in Parkinson\'s patients.

#### References

## Abstract: 140 - Date: 2019-06-29 18:03:38pm

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#### **Topic of Summary**

Special body function problems e.g. spasticity, urinary system, sexuality, dysphagia, speech disorders and others

#### **Title of Summary**

Dysfunctional voiding in women: urodynamic study

## Keywords

urodynamic; dysfunctional voiding, women

#### **Authors**

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#### Affiliations

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### Introduction

Describing presenting symptoms and urodynamic findings in women with dysfunctional voiding

#### Materials & Methods

28 women with dysfunctional voiding were recruited during the neuro-urology consult in the department of physical medicine and rehabilitation.\r\nThose with a neurological disease or urogenital prolapse before evaluation were excluded from study.. The diagnosis of dysfunctional voiding was made on urodynamic test. \r\n

#### Results

Mean patient age was 53.6 years (22 to 75). Frequency and urgency were the most common presenting symptoms in 71.4% of cases. Urge and stress incontinence was noted in 12 (42.8%) and 8 patients (28.5%), respectively, while 2 (7%) had a history of recurrent urinary tract infection. Cystometry revealed detrusor instability in 6 cases (21.5%), sensory urgency in 10 (35.7%) and impaired compliance in 2 (7%). There was great variability in voiding parameters: dysuria in 18 patients (64.2%) with significant post void residual in 10 patients (35.7%). Urethral pressure was normal in 53.5%.

#### Discussion

#### Conclusion

Female patients presenting with lower urinary tract symptoms may have dysfunctional voiding patterns and storage symptoms. These patients tend to have decreased flow and high post-void residual urine volume. However, there is wide variation in these parameters among individuals.

#### References

## Abstract: 142 - Date: 2019-06-29 19:50:52pm

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## **Topic of Summary**

PRM in orthopaedics and musculoskeletal disorders

#### **Title of Summary**

Benefits of isokinetic evaluation in meniscus injuries

#### Keywords

Isokinetic evaluation; Meniscus injuries; rehabilitation

## **Authors**

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## **Affiliations**

Department of physical medicine and rehabilitation of CHU Ibn Rochd in Casablanca Morocco

## Introduction

The objective of the study presented is to determine the benefit of isokinetic evaluation in meniscus injuries.

#### **Materials & Methods**

it's a retrospective study lead from December 2018 to May 2019 concerning 10 patients who suffered from meniscus injuries MRI-confirmed and for whom an isokinetic evaluation was done to guide therapeutic management.

#### Results

It's about 10 patients suffering from meniscus injuries, predominantly male, the average age is 35,2 years. Isokinetic evaluation showed quadriceps / hamstring deficiency on the injured side with an average quadriceps deficit of 25% and an average hamstrings deficit of 28%. All patients had classic functional rehabilitation with 6 patients who benefited from isokinetic rehabilitation . We noted the improvement of our patients at the end of the care program.

#### **Discussion**

#### Conclusion

Isokinetic protocols are a useful adjunct to conventional assessment and rehabilitation methods used in knee pathology.

#### References

# Abstract: 144 - Date: 2019-06-29 20:15:51pm

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## **Topic of Summary**

Special body function problems e.g. spasticity, urinary system, sexuality, dysphagia, speech disorders and others

#### **Title of Summary**

Non-Neurological Urinary Incontinence Impact on sexuality among Tunisian Women

## Keywords

urinary incontinence-sexuality

#### **Authors**

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#### **Affiliations**

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## Introduction

Our study aimed to evaluate the impact of non-neurological urinary incontinence on sexuality among Tunisian women.

#### Materials & Methods

This was a cross-sectional descriptive study involving women with non-neurological urinary incontinence followed at the urodynamic unit at the Physical Medicine and Rehabilitation department of the University Hospital of Monastir over six months.\r\nThe analyzed data focused on the epidemiological and clinical characteristics.\r\nWe used a validated questionnaire to evaluate sexual function: the Female Sexual Function Index (FSFI) and for symptoms: Urinary symptom profile (USP).\r\n

#### Results

Fifty women with an average age of 51 years were included. Women were diabetic in 24%. The most frequent symptom was urgency in 76%. \r\nStress urinary incontinence was found in 64%.\r\nThe median USP overactive bladder score was 9.3 out of a maximum of 21.The median USP stress urinary incontinence score was 2.6 out of 9.\r\nEighty percent of our patients were sexually active, 73.17% of them have sexual dysfunction (FSFI ≤ 26.55) and 65% reported hypoactive sexual desire,45 % complained of orgasmic deficiency, and 48 % suffered from dyspareunia.\r\nSexual dysfunction was negatively correlated with age and urinary stress incontinence.\r\nNo correlation was found between FSFI, urgency urinary incontinence, dysuria and diabetes.\r\n

#### **Discussion**

## Conclusion

The negative impact of urinary incontinence on sexual health is evident in our study and it is rarely discussed by health professionals and patients with urinary incontinence and requires more attention.

#### References

# Abstract: 148 - Date: 2019-06-29 20:48:24pm

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#### **Topic of Summary**

Special body function problems e.g. spasticity, urinary system, sexuality, dysphagia, speech disorders and others

#### **Title of Summary**

Pelvic Organ Prolapse Impact On Sexuality Among Tunisian Women

## Keywords

pelvic organ prolapse- sexuality

#### **Authors**

Migaou Houda; El Fani Nadra; Boudokhane Soumaya; Loubiri Ines; Jellad Anis; Ben Salah Frih Zohra.

#### Affiliations

Physical Medicine and Rehabilitation Department, University Hospital of Monastir, Tunisia.

#### Introduction

The purpose of our study was to evaluate the impact of Pelvic organ prolapse (POP) on sexuality among Tunisian women.

#### **Materials & Methods**

We conducted a descriptive study involving patients with POP referred to the Physical Medicine and Rehabilitation department of the University Hospital of Monastir. \r\nThe analyzed data focused on the epidemiological and clinical characteristics.\r\nWe used the Pelvic Organ Prolapse Quantification (POPQ) to evaluate the prolapse grade, and the Female Sexual Function Index (FSFI) to evaluate sexual function.\r\n

#### Results

Forty-one patients with POP were included in our study, the average age was 51.95 years [30-82].\r\nThe clinical examination revealed cystocele in 73.1% of patients, hysterocele and rectocele respectively in 48% and 41% of patients.\r\nThe majority of POP were ranked between 1 (41%) and 2 (53%).\r\nSeventy-five percent of our patients were sexually active and 73.17% of them had sexual dysfunction (FSFI  $\leq$  26.55).\r\nLack of excitement and decreased orgasm were the most reported disorders.\r\nDyspareunia was reported in 55% of our patients.\r\nWe found a statistically significant association between age, dyspareunia, and sexual dysfunction [p <0.001].\r\n

## **Discussion**

## Conclusion

The effect of prolapse-related symptoms on sexuality is debatable and existing data in the literature are contradictory.\r\nIn our study, we found that satisfaction with sexuality was low.\r\n

# Abstract: 149 - Date: 2019-06-29 20:57:24pm

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## **Topic of Summary**

PRM in orthopaedics and musculoskeletal disorders

### **Title of Summary**

Quality of life associated factors in Tunisian Post-polio patients

## **Keywords**

post -polio syndrome - Quality of life

#### **Authors**

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Physical Medicine and Rehabilitation Department, University Hospital of Monastir, Tunisia.

#### Introduction

The aim of our study was to assess quality of life (QoL) and identify associated factors in patients with post-polio syndrome (PPS).

#### **Materials & Methods**

This is a descriptive study involving all PPS patients followed at the Physical Medicine and Rehabilitation department of the Monastir University Hospital.\r\nThe data analyzed were epidemiological and clinical characteristics.\r\nQoL was evaluated by the Short form survey (SF-36), pain intensity: the Visual Analog Scale (VAS), fatigue:the Multidimensional Fatigue Inventory (MFI-20) and the Borg RPE scale ,the functional independence measure (FIM)and psychological disorders with the Hospital Anxiety and Depression scale (HAD).\r\n

#### Results

Forty five patients were included in this study, the average age was 52.  $4 \pm 7.5$  years.\r\n All areas of QoL were affected.\r\nThe most affected domain was physical functioning (PF) with an average score of 32.5 [15.2-55].\r\n The QoL was better for the mental component (MCS) compared to the physical component (PCS) (average scores: 43.7 and 35.6 respectively).\r\n Statistically significant and negative correlation was found between the domains: \"PF\" and the mental health (MH) and the general mental component (MCS) of the QoL and the BMI.\r\n\r\nThe SF-36 domains was negatively correlated with the Borg RPE scale and all items of fatigue assessed by the MFI-20 except for activity and motivation reduction, HAD and pain intensity. \r\n

## Discussion

Postpolio-syndrome has a negative impact on QoL. \r\nThe identification, early recognition and rehabilitation of postpolio-syndrome patients may result in an improvement in their QoL.\r\n

# Abstract: 153 - Date: 2019-06-29 22:10:53pm

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## **Topic of Summary**

PRM in orthopaedics and musculoskeletal disorders

## **Title of Summary**

Interest of the Mulligan concept in the management of bimalleolar fractures

## **Keywords**

Mulligan, bi malleolar fracture

#### **Authors**

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CHU Taher Sfar Mahdia; UPSAT

#### Introduction

The aim of this study was to evaluate the interest of the Mulligan concept in the management of patients after bi malleolar fractures.

#### **Materials & Methods**

A prospective comparative study over a 4-month period was conducted, involving patients followed after a bi malleolar fracture. They were divided into 2 groups. Those in Group A benefited from a standard protocol of rehabilitation while those in Group B benefited from the standard protocol associated to the Mulligan concept. Each patient was followed for 1 month with a rhythm of 3 sessions per week. An assessment was made initially and at the end of the protocol. The parameters studied were: pain using the Visual Analog Scale (VAS), range of motion using goniometric measurement, muscle strength assessed by Daniels and Worthing Ham rating and functional capacity using Kaikkonen scale.

#### Results

At the end of the study, we noted a decrease in the VAS in both groups and meanly in group B. Similarly, we noted a restoration of the ankle range of motion and an improvement in muscle strength which were more important in group B.

## **Discussion**

#### Conclusion

Our results showed the interest of the Mulligan concept in the management of patients after a bimalleolar fracture. However, other larger, long-term studies would be needed to compare the Mulligan concept with the standard protocol or other conventional treatments.

## References

none

# Abstract: 155 - Date: 2019-06-29 22:29:54pm

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## **Topic of Summary**

Special body function problems e.g. spasticity, urinary system, sexuality, dysphagia, speech disorders and others

## **Title of Summary**

Vesico-sphincteric disorders in spinal cord injured patients: interest of therapeutic education in clean intermittent self†catheterisation

### **Keywords**

Clean Intermittent selfcatheterisation - spinal cord injury

## Authors

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#### Introduction

The aim of this study is to demonstrate the value of Clean Intermittent self― catheterisation education by evaluating patient compliance to bladder catheterisation and the difficulties encountered.

## **Materials & Methods**

This is a prospective descriptive study spread over 17-month (May 2016 to September 2017), including 30 patients with spinal cord injuries who had CISC. The data were collected from the medical records of the Department of Physical Medicine and Functional Rehabilitation, a questionnaire based on daily hospital practice and a validated test (I-CAS).

## Results

The average age was 28.2 years, a sex ratio of 2.33 (21 men for 9 women). Half of patients had fully understood how to perform CISC, without fear of the act. \r\n80% of patients were under self catheterisation. After 3 months, it was observed that only 73% of patients continued the CISC against 68% after 6 months. \r\nMedium and long term compliance was correct.

## Discussion

#### Conclusion

It is necessary to introduce a structured educational approach to support patients in control of CISC and propose solutions to observed difficulties.

## Abstract: 157 - Date: 2019-06-29 22:39:45pm

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## **Topic of Summary**

PRM in orthopaedics and musculoskeletal disorders

#### **Title of Summary**

TOTAL KNEE ARTHROPLASTY ON HEMOPHILIC ARTHROPATHY: ABOUT 6 CASES

## **Keywords**

HEMOPHILIC ARTHROPATHY; TOTAL KNEE ARTHROPLASTY

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#### Introduction

The aim of our work is to describe the functional results after rehabilitation in hemophiliac patients operated for total knee arthroplasty.

#### **Materials & Methods**

This is a retrospective descriptive study, carried out in the service of MPR of Ibn Rochd University Hospital, Casablanca, over a period of 6 years (2012 to 2018).\r\nRehabilitation was started immediate postoperatively, with the objectives of recovery of joint mobility, muscle strengthening, walking work. Evaluation consisted of a joint assessment before and after rehabilitation, functional score IKS and specifying all complications encountered.

#### Results

During study period 11 TKP were performed for 6 patients. The mean age of patients was 33.6 years, 5 hemophiliacs A and 1 hemophiliac B.\r\nAccording to IKS, pain was rated on average 4.5 preoperatively and 48 postoperatively, the knee score increased to 89.5 postoperatively versus 42.5 preoperatively and the function score increased to 75 postoperatively versus 17.5 preoperatively.\r\nThe increase in joint range was important in all patients with an average of 77.54.\r\n3 cases of subcutaneous hematomas were encountered.

## **Discussion**

## Conclusion

Knee arthroplasty is of great interest in treatment of chronic arthropathies in hemophilia patients. Our results in medium-term and long-term surgery are good or excellent, and many patients are returning to work.

#### References

## Abstract: 158 - Date: 2019-06-29 22:40:08pm

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## **Topic of Summary**

PRM in paediatric problems

#### **Title of Summary**

Clinical profile of vesico-sphincteric disorders for children

## **Keywords**

#### **Authors**

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#### Introduction

The purpose of this study is to describe the clinical profile of children with Vesico-Sphincteric Disorders (VSD).

#### **Materials & Methods**

Descriptive prospective study, including 81 children referred to outpatient clinics for urinary disorders, over a period of 4 years, from 2013 to 2017. Data collection was done by a previously established record of exploitation.

## Results

A total of 81 children were included in this study, of which 65% were between 6 and 12 years old and had a sex ratio of 0.47. CNAM coverage was found in 73%. Recurrent urinary tract infections were the most common antecedents (25%) followed by neurological conditions (17%). The functional symptoms leading to the consultation were mainly leaks, urge and enuresis with respectively 48%, 40% and 38%. At the clinical examination, the perineal sensitivity was decreased in 10% of cases, the anal tone was normal for 68 patients (84%). Releaser testing was low in 30%. Cone reflexes were present in 42% of cases and the Babinski sign was identified in only 11 patients (14%). At the end of the clinical examination, a neurological bladder was suspected in 17 children.

## **Discussion**

## Conclusion

Although VSD are benign, they can cause severe urethral and kidney complications and impaired quality of life. The diagnosis is usually easy by simple questioning and clinical examination. But the use of complementary examinations in some would be essential including the urodynamic assessment.

#### References

## Abstract: 175 - Date: 2019-06-30 08:32:30am

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#### **Topic of Summary**

Special therapeutic methods in PRM

#### **Title of Summary**

ADVANCED HOMEOPATHY: AN EFFECTIVE COMPLEMENTARY THERAPEUTIC TOOL APPLIED BY PHYSIATRISTS AND ALL MEDICAL SPECIALIZATIONS. PRESENTATION OF CLINICAL CASES

#### **Keywords**

#### **Authors**

Papadopoulou M.; Nasoufi An.; Sinaplidou M.; Pappis D.

#### **Affiliations**

Advanced Homeopathy Concept – AD.HO.C. [International Medical Association of Advanced Homeopathy

## Introduction

The medical doctors, in addition to the chemical prescribing of their specialization, acquire access to advanced homeopathy prescribing as well, which they can apply to their discretion, complementary, alternatively or autonomously, depending on the case of their patients.

#### **Materials & Methods**

15 presentations of clinical cases. Patients suffering from orthopedic, neurological and musculoskeletal disorders

## Results

\r\nThis study is based to the internationally prevailing concept that Medicine is one and unified, and that medical doctors of all specializations have the right to have access and use all available therapeutic methods on the basis of their choice and aiming at the benefit of the patient. In modern Medicine the therapeutic approach of academic medicine prevails, thus Advanced Homeopathy is applied in parallel to a significant percentage of world population, according to the data of the World Health Organization. Advanced Homeopathy enriches the therapeutic arsenal of doctors of all specializations with homeopathic pharmaceutical syntheses that effectively support the human organism in the psycho-intellectual and physical pathological conditions faced, without presenting any incompatibility, contraindication, synergy, antagonism or interaction with any other chemical drug.

#### Discussion

With the parallel implementation of Advanced Homeopathy, the doctor of physical medicine and rehabilitation has the ability to manage their patients in a dual manner, deploying, at their own discretion, two distinct therapeutic support routes.

#### References

## Abstract: 176 - Date: 2019-06-30 09:24:18am

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## **Topic of Summary**

Neurorehabilitation, spasticity

## **Title of Summary**

Effects of radial shock wave therapy on sural triceps spasticity in hemiplegic patients

#### **Keywords**

spasticity; radial shock; hemiplegia

## **Authors**

Ghada Rhaiem1; BHY Iheb1; Moncer Rihab2; Jemni Sonia2; Khachnaoui Faycel2

#### **Affiliations**

1Unit Of physical and rehabilitation medecine Ksar hlel; 2Physical and rehabilitation department, Hospital University Sahloul, Sousse Tunisia;

#### Introduction

To assess the effect of radial shockwave therapy on sural triceps spasticity and passive joint motion in patients with hemiplegia and evaluate that effect on risk of falling

#### **Materials & Methods**

A comparative experimental study on 8 patients with hemiplegia followed in Unit Of physical and rehabilitation medecine Ksar hlel. 4 patients got a classic rehabilitation and the second group got classic rehabilitation program associated to radial shock wave on Sural triceps. Each patient got a clinical evaluation of spasticity with ashworth scale, functional evaluation with MIF and evaluation of falling risk with tinetti scale at first and after 4 weeks of rehabilitation.

#### Results

Final evaluation has shown an improvement of all parameters. This improvement was more notable in second group.

#### **Discussion**

Action of wave therapy on spaticity is still unknown but this experimental study show that it improve classical program in spasticity.

#### References

neurological examination; spaticity evaluation; rehabilitation.

## Abstract: 179 - Date: 2019-06-30 09:39:18am

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## **Topic of Summary**

PRM in paediatric problems

#### **Title of Summary**

Imapact of postural and gymaanstic education on Low back pain in children

#### **Keywords**

children; low back pain; education; posture

## **Authors**

Moncer Rihab1; Mayssa Zid 1; BHY Iheb 2; Mtawaa Sahb1i; Toulgui Emna1; Ouannes Walid1; Frigui Sinen1; Jemni Sonia1; Khachnaoui Faycel1

#### **Affiliations**

1Physical and rehabilitation department, Hospital University Sahloul, Sousse Tunisia; 2 Unit Of physical and rehabilitation medecine Ksar Hlel Tunisia.

#### Introduction

Determine outcome after postural education on Low Back Pain (LBP) on childhood

## **Materials & Methods**

A cross sectional study conducted on school of Susse. We selected at first children with LBP; pain characteristics' and associated factors by a questionnaire. Then each child had a clinical evaluation at day 0 and after 2 months after 3 sessions of postural and medical gymnastics education.

## Results

Among 36 child selected aged 12 years old; 29 suffer from BP. This pain was related to heavy school back in 72% of cases. First clinical evaluation has found postural disorder; hyperlordosis in 26%; shoulder unbalance in 21% of cases and restriction of spine motion in 100%. After education we noticed an improvement of pain and clinical disorder.

## **Discussion**

BP in childhood is still underestimated. Analyzing related factors and ergonomic education may protect children from such disorder

#### References

spine examination, medical gymnastic; postural education

## Abstract: 180 - Date: 2019-06-30 09:43:46am

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## **Topic of Summary**

PRM in orthopaedics and musculoskeletal disorders

#### **Title of Summary**

MELORHEOSTOSIS IN THE UPPER LIMB

#### **Keywords**

Melorheostosis, sclerosing bone dysplasia, treatment

#### **Authors**

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#### **Affiliations**

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## Introduction

Melorheostosis is an uncommon mesenchymal dysplasia, classified within the sclerosing bone dysplasias. Its main manifestation is pain. Diagnosis is made using image techniques such as plain radiograph where we can see characteristic features like flowing candle wax appearances. We present this case due to the infrequent nature of the disease itself and the doubts that we can raise when making a correct differential diagnosis with other pathologies.

#### Materials & Methods

A 46-year-old male referred for pain and functional limitation of the right elbow for years of evolution. On examination, he suffered diffuse pain on palpation over right shoulder, elbow, wrist and first finger of the hand, limitation of range of motion of the shoulder and elbow, and rigidity of metatarsophalangeal and interphalangeal thumb joints so he could not perform pincer grasp. In plain radiograph we found significant thickening of the phalangeal and distal third of the radius cortex, and calcifications in scaphoid, trapezius and radius head. In the shoulder MRI, diffuse sclerosing of the anterolateral cortex of the middle and distal humeral shaft was observed. There was also a big calcification that affected the bone marrow in the humeral head.

## Results

Treatment was ordered with analgesic electrotherapy and kinesitherapy that had to be suspended, since the patient did not tolerate the treatment due to worsening of pain with exercise.

## **Discussion**

## Conclusion

Melorheostosis is a benign disease. There is no specific treatment. Therapy is symptomatic and is aimed at controlling bone pain. In some cases, good results have been obtained with pamidronate infusions.

## Abstract: 185 - Date: 2019-06-30 11:10:49am

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## **Topic of Summary**

Pain management in PRM

#### **Title of Summary**

CAPSAICIN PATCH IN THE TREATMENT OF PUDENDAL NEURALGIA

#### **Keywords**

#### **Authors**

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#### Introduction

Introduction: Pudendal neuralgia is one of the most disabling forms of genital pain, affecting approximately 4% of patients with chronic pelvic pain. The clinic is characterized by neuropathic pain in the perineal area. Its diagnosis is often delayed or misdiagnosed, because the clinical manifestations can simulate other pathologies. Regarding the treatment, there are several strategies, with an additional option being the high concentration capsaicin skin patch (8%), designed to act locally in the affected area.

#### **Materials & Methods**

Clinical observation: A 24-year-old male patient assessed for perineal neuropathic pain of 1 year of evolution (VAS: 9), without trigger. It was diagnosed of bilateral pudendal neuralgia after diagnostic blockage of the walter ganglion and positive neurophysiology. The Pain Unit performed radiofrequency treatment in S3 bilaterally, without improvement. Subsequently, the patient needed to remain seated for a long time to be operated on for bilateral release of the pudendal nerve in a reference hospital in this surgery, so it was referred to our rehabilitation service, and treatment with capsaicin patch, in the perineal and suprapubic areas, was decided.

#### Results

At the 3-month check-up, there was relief with a VAS: 4 and in post-treatment surgical revisions, pain improvement was observed (VAS: 2), in addition to a significant reduction in analgesic medication.

### **Discussion**

Conclusions: The application of the capsaicin patch can be considered useful as an alternative, effective and safe tool in the treatment of pudendal neuralgia, favoring the reduction of pain and oral medication, and thus improving the quality of life of the patients.

# Abstract: 191 - Date: 2019-06-30 12:26:24pm

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## **Topic of Summary**

Pain management in PRM

### **Title of Summary**

Does kinesiophobia have a significant impact on the rehabilitation of patients with osteoarthritis of the knee (OAK)

## **Keywords**

kinesiophobia, osteoarthritis

#### **Authors**

Dr Daniela Matic

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#### Introduction

To assess influence of kinesiophobia on the treatment duration and functional recovery in patient with OAK.

#### **Materials & Methods**

Controlled non randomized study included 36 patients with OAK, treating in GH Krusevac, September - December 2018.,divided into two groups a=22(non kinesiophobic),b=14(kinesiophobic). Data were collecting using self-administrated questioners (TSK-13), measurements (WOMAC index,ROM, circumference of knee,MMT)on: baseline, after 4,12 weeks and processed by descriptive and inferential statistics.

## Results

Groups were homogeneous (gender, age, ROM, circumference of knee, MMTof femoral muscles). \r\nAfter 4 weeks there was statistically significance in reduction of pain in both groups toward the baseline in the same group, and between groups toward the: walking on flat, sitting/laying in favor of group a, increase the ROM of knee and femoral muscle strength, decrease of circumference of affected knee in favor of group a, also. The degree of kinesiophobia was maintained toward the baseline in the same group and between groups. \r\nAfter 12 weeks there was statistically significance in reducing the pain between groups toward the: walking the flat, night pain, walking up/down the stairs, sitting/lying; increase ROM and muscle strength in favor group a. Degree of kinesiophobia, between groups and in the same group toward baseline, maintained.\r\nThere was statistically significance between groups toward duration of treatment(group a= 15,4 days, group b= 25,8 days)in favor of non kinesiophobic patients.

## Discussion

Kinesiophobia affects on duration of treatment and effectiveness of the applied physical therapy in patients with OAK, but applied physical therapy has no effect on the degree of their kinesiophobia.

## References

Pain Res Treat. 2017; 2017: 3489617.\r\nPublished online 2017 May 29. doi: 10.1155/2017/3489617\r\nPMCID: PMC5467352\r\nPMID: 28634547\r\nKinesiophobia, Pain, Muscle Functions, and Functional Performances among Older Persons with Low Back Pain

# Abstract: 196 - Date: 2019-06-30 13:03:10pm

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### **Topic of Summary**

PRM in paediatric problems

## **Title of Summary**

Observational perspectives of the itinerant occupational therapy service in after school day service for children with disabilities

## **Keywords**

after school day service, developmental disorder

#### **Authors**

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#### Introduction

Saitama prefectural association of occupational therapists is conducting an itinerant occupational therapy service project intended for after school day service for children with disabilities. The first author joined this project and visited to one after school day service 13 times from August 2017 to March 2018. Day service staff was provided indirect support by occupational therapist. There is a few evidence for the effects of itinerant service. The purpose of this study was to retrospectively evaluate the effects of itinerant occupational therapy.

## **Materials & Methods**

Qualitative inductive analyses were performed on clinical records of the first author. The first and second author divided the data into categories.

## Results

The occupational therapist got information about \"children's condition\" and \"the cause of behavior\" from the staff. He observed "physical and mental condition" of the children and \"behavior of the children\" on site. Also he listened \"the good practice by staff\" and \"the results of following the advice\". He observed \"program contents\" by staff and "environment", Then he heard \"the information about parents\" and \"the condition in other institution\".

## **Discussion**

## Conclusion

The findings of this study suggest that occupational therapist may pay attention to children, staff, parents and other institutions in after school day service for children with disabilities.

# Abstract: 197 - Date: 2019-06-30 13:08:26pm

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## **Topic of Summary**

Special body function problems e.g. spasticity, urinary system, sexuality, dysphagia, speech disorders and others

## **Title of Summary**

PROFIL URODYNAMIQUE DE L'INCONTINENCE URINAIRE NON NEUROLOGIQUE FEMININE

## **Keywords**

Urinary incontinence, prolapse, urodynamic assessment

#### **Authors**

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#### Introduction

State the etiological and urodynamic profile of urinary incontinence in our patients and compare the results of our series with data from the literature

#### **Materials & Methods**

This is a prospective, descriptive study spread over one year involving 11 patients followed in urology for urinary incontinence, collected at the urodynamic consultation at the Physical Medicine and Rehabilitation Department at the Mohammed VI University Hospital (Marrakech). - Morocco). The mean age was 43.87, the majority of patients had several risk factors for pelvic floor disorders. All the patients had a urinary complaint mainly associated with prolapse. Urinary urgency, stress urinary incontinence, mixed urinary incontinence, dysuria and pollakiuria were the urinary signs found.

## Results

The urodynamic assessment showed a dysuria at the flow rate, a significant post-void residue in some cases; with cystomanometry, bladder hypersensitivity, reduced bladder capacity and detrusor hyperactivity.

## **Discussion**

## Conclusion

Urodynamic explorations find all their diagnostic and prognostic value in the evaluation of urinary incontinence in women outside the neurological bladder. They make it possible to objectify the physiological mechanism of incontinence and thus to propose appropriate care.

#### References

No conflit of interest

# Abstract: 198 - Date: 2019-06-30 14:33:40pm

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#### **Topic of Summary**

Neurorehabilitation, spasticity

#### **Title of Summary**

Complex regional pain syndrome in spinal cord injured patients

### **Keywords**

Complex regional pain syndrome, spinal cord injury

#### **Authors**

Ramiro Palazón Garcia; Ana M Benavente Valdepeñas\*; Mónica Alcobendas Maestro; Silvia Ceruelo Abajo; Rosa M Casado López

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## Introduction

To determine the incidence of Complex Regional Pain Syndrome (CPRS) in spinal cord injured (SCI) patients. CPRS usually occurs after a traumatic injury, and it expresses a functional or real neurological injury.

#### **Materials & Methods**

Observational and retrospective study on acute SCI patients admitted to a monographic SCI hospital during 6 months was performed. 113 patients were collected. Demographic data, level of injury, neurological classification, traumatic antecedents (fractures), clinical features and therapies applied were analyzed. Data were analyzed using the SPSS 19 statistical package.

## Results

21 patients had been diagnosed as CPRS according to Budapest criteria, only 9 of them associated radiological sympathetic reflex dystrophy. Therefore, they represent 18.8% of the acute cases, and if we only consider the cervical injured patients would be 44,4%. Localization was hand- shoulder in 20 cases and knee in another case.\r\nUnlike other etiologies, female sex or previous psychiatric disorders do not predominate so significantly in those patients. In patients affected by CPRS there is a non- significant association with central cord syndrome, concomitant neuropathies, previous fractures or hypothyroidism.\r\nThe applied treatment was symptomatic; physical therapy to recover ranges of joint movements and avoid vascular signs, anticonvulsant or antidepressant drugs for neuropathic pain, and bisphosphonates or calcitonin for osteoarticular disturbances.

#### Discussion

#### Conclusion

Prevalence of CPRS within SCI patients can be high, overall among those with cervical lesions.

## References

# Abstract: 202 - Date: 2019-06-30 15:18:46pm

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## **Topic of Summary**

Neurorehabilitation, spasticity

#### **Title of Summary**

Clinical evolution of Guillain-Barré syndrome after prolonged mechanical ventilation

## **Keywords**

Guillain-Barre Syndrome; Mechanical Ventilation; Ventilatory weaning; Rehabilitation

## **Authors**

Antonio Araujo; Filipe Matos; Ines Machado-Vaz; Jesus Benito

#### **Affiliations**

Centro Hospitalar e Universitário de Coimbra; Hospital Garcia de Orta; Centro de Reabilitação do Norte; Institut Guttmann

## Introduction

To describe frequency, clinical course and prognostic factors in patients with Guillain-Barré syndrome (GBS) who required prolonged mechanical ventilation (MV).

#### Materials & Methods

Retrospective, descriptive study, which included all patients admitted in the last 12 years in a Rehabilitation Center with GBS and under MV on admission. All patients were included in a ventilatory weaning program. Level of functionality was assessed by Functional Independence Measure and GBS disability scale.

## Results

Of the total of 156 patients admitted with GBS, 51% required MV although only 15% (n=24) maintained MV at admission to the RC. GBS onset age had a bimodal distribution (31-40y and 51-60y), with male predominance (2:1). Mean time of MV was 139days (SD±64) and length of hospital stay was 163days (SD±78). Mortality rate 8%. The most common electromyographic pattern revealed axonal neuropathy (46%), the most common treatment was immunoglobulin (46%). Ventilatory weaning was achieved in 79% of patients and were discharged to their home with mean FIM of 85 (SD±29). In 13% of the cases ventilatory weaning was not feasible.

## **Discussion**

## Conclusion

We observed a recovery of ventilatory function in 79% of the cases although functional changes persisted at discharge, with only 33% of the patients presenting gait ability. Ventilatory weaning in GBS can be performed in Rehabilitation Centers with high success rates and demonstrates the important role of a multidisciplinary intervention in the optimization of vital and functional prognosis.

# Abstract: 204 - Date: 2019-06-30 15:24:59pm

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## **Topic of Summary**

Neurorehabilitation, spasticity

### **Title of Summary**

Adult polyglucosan body disease – approach and evolution in an intensive rehabilitation program

## **Keywords**

#### **Authors**

Ismael Carneiro; Margarida Rodrigues; Ana Machado Lima

#### **Affiliations**

Centro de Reabilitação do Norte; North Rehabilitation Center

#### Introduction

Adult polyglucosan body disease is a rare genetic disorder. This condition is characterized by an enzymatic deficiency, resulting in the accumulation of polyglucosan bodies in muscles, nerves and other tissues. Central and peripheral nervous system may be affected with a multitude of clinical presentations.

#### **Materials & Methods**

We present a case of a 65 years old woman with a history of urinary incontinence for a decade, followed by hypotension symptoms and, more recently, an episode of hypothermia.

#### Results

The diagnose of adult polyglucosan body disease was established only a year ago and was confirmed by nerve biopsy and the identification of two pathologic genetic variants, one of which was never been reported in literature. This patient was recently evaluated in a physical medicine and rehabilitation consult, presenting with decreased lower limbs muscle strength, difficulty in maintain orthostatic position and gait problems. Skin burns during cooking and difficulties in activities of daily living were also reported. An inpatient intensive rehabilitation program was proposed to this patient.

## **Discussion**

#### Conclusion

The authors pretend to describe the clinical and functional evolution of this patient in a multi professional and disciplinary rehabilitation program.

# Abstract: 206 - Date: 2019-06-30 15:29:06pm

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# **Topic of Summary**

Rehabilitation services in Mediterranean countries and Africa

## **Title of Summary**

Epidemiological profile of traumatic brain injured in rehabilitation department

# **Keywords**

traumatic brain injured-epidemiological- rehabilitation department

#### **Authors**

El Fani Nadra;Toulgui Emna;El Arem Soumaya;Gaddour Mariam;Ouanes Walid;Jemni Sonia;Khachnaoui Faycal

#### **Affiliations**

Physical Medicine and Rehabilitation Department, Sahloul University Hospital of Sousse, Tunisia.

# Introduction

The aim of this study was to highlight the epidemiological characteristics and therapeutic approaches of traumatic brain injury in patients in the physical and rehabilitation department.

# **Materials & Methods**

This is a descriptive study involving all TBI patients, hospitalized in Physical and Rehabilitation department in Sahloul Tunisia.

# Results

Fifty five patients were included in this study with a sex ratio of 9/2. The average age was 27 years.\r\nThe trauma was mainly caused by a road accident (75%) or a work accident (10.7%). Mean Glasgow Outcome scale following the trauma was 6/15. \r\nMost of patients (66.1%) were transferred from intensive care department and 5,6% of them came from an orthopedic ward. The transfer delay to rehabilitation ward was less than one month in 30.2% of cases and between 1 and 3 months in 51.2% of cases. \r\nThe average rehabilitation stay period was 27 days. \r\n A neurosurgical intervention was performed in 38.9% of patients. At admission, 40.9% of patients were spastic, 3.7% were vegetative. 18.7% of patients had a percutaneous endoscopic gastrostomy (PEG) tube 5.8% patient with tracheostomy tube. During their care, 57.8% developed pressure ulcers, infectious complications were isolated in 43.9% case, 9% of the patients had thromboembolic events. \r\nThe Neurogenic para-osteo-arthris was found in 35.6% of cases.\r\n

# Discussion

#### Conclusion

Depending on its severity, traumatic brain injury may require a lifelong rehabilitation process. A comprehensive assessment of complications after traumatic brain injury is crucial to plan

the appropriate management. This requires an understanding of the medical, functional, cognitive, behavioral, and psychosocial consequences.

#### References

# Abstract: 207 - Date: 2019-06-30 15:29:44pm

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# **Topic of Summary**

Cardiovascular and pulmonary prevention and rehabilitation

## **Title of Summary**

Bilateral cerebellar stroke with brainstem compression - evolution in an intensive rehabilitation program

# **Keywords**

# **Authors**

Ismael Carneiro; Amílcar Cordeiro; Ana João Costa; Ana Machado Lima; Inês Machado Vaz

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# Introduction

Cerebellar strokes are a less frequent cause of a vascular syndrome compared to other central nervous system. Nonetheless, cerebellar strokes have disproportional mortality and morbidity in part due to its relation with the brainstem.

#### **Materials & Methods**

We present a case of a 41 years old man, with personal history of alcohol and tobacco consumption, who had a bilateral cerebellar stroke. This vascular syndrome was complicated with cerebellar amygdala herniation and brainstem compression, with the need of life-saving craniotomy and ventricular derivation. The patient was admitted in an intensive care unit with invasive ventilatory support.

# Results

One month and 7 days after the event, the patient was transferred to a specializes rehabilitation center to perform an inpatient intensive rehabilitation program. At admission, the patient presented tracheostomy cannulation, sialorrhea, feeding exclusive by percutaneous gastrostomy, ataxic tetraparesis and functional dependency. Further evaluation was undertaken with endoscopic evaluation of swallowing, spirometry, manometry, peak cough flow, blood gasimetric analysis and nocturnal oximetry. An individualized and interdisciplinary rehabilitation program was prescribed covering all identified problems. During this rehabilitation program, it was possible to take off tracheostomy with ostomy closure and the

patient began non-invasive ventilation. Oral exclusive feeding, autonomous gait and modified independency in daily life activities were achieved and the patient was able to return home.

# **Discussion**

# Conclusion

The authors pretend to describe in this case the favorable clinical and functional evolution in a multiple professional and disciplinary rehabilitation approach.

# References

# Abstract: 212 - Date: 2019-06-30 17:41:48pm

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# **Topic of Summary**

Residents and young PRM in the Mediterranean countries

## **Title of Summary**

Physical Medicine and Rehabilitation residency. Is it all the same? An example of two Europe neighboring countries

# **Keywords**

Residency, Physical Medicine and Rehabilitation, Iberic Peninsula

#### **Authors**

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# Introduction

Spain and Portugal are two neighboring countries with many similarities, but when it comes to PRM residency program and post residency integration in public health system, there are important differences that weigh in their future.

# **Materials & Methods**

We describe the differences in the PRM residency program in both countries, and job search steps after residency, making a comparison.

# Results

The first difference is the duration, 4 years in Spain and 5 in Portugal. In both countries, residents rotate in different areas. There are also differences in the evaluation method, in both countries a report after each rotation is made where the experience obtained is considered, but in Portugal at the end of each year residents' knowledge is also assessed through an examination. In Portugal, at the end of the 5-year residency, a final exam is carried out, while in Spain it isn't.\r\nAfter residency in Portugal, the final grade is the one that is used in public contest where the ones with higher grades are the first ones to choose from a list of previously published public hospital vacancies. In contrast, in Spain, specialists must present their curriculum in different hospitals and wait for a public opposition to be convened and approved in order to obtain a place in public health.\r\n

# Discussion

## Conclusion

Getting to know the main differences and similarities between PRM residency and steps for job search in other countries may help young PRM in Mediterranean Countries to look for internships and job opportunities. This makes our community stronger.

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# Abstract: 216 - Date: 2019-06-30 18:06:27pm

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# Topic of Summary

Special therapeutic methods in PRM

## **Title of Summary**

Use of hyaluronic acid gel in lagophthalmos

# Keywords

Lagophthalmos, hyaluronic acid gel, facial palsy

# **Authors**

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Physical and Rehabilitation Medicine Service at Hospital Universitario Nuestra Señora de la Candelaria, Tenerife, Spain.

# Introduction

Use of hyaluronic acid gel in the management of paralytic lagophthalmos after rejecting a gold weigh

## **Materials & Methods**

After rejecting the gold weigh, we infiltrate 0.1 ml of hyaluronic acid gel in the upper eyelid with the aim of getting the complete eye closure

#### Results

Since the first injection the patient has been allowed to close completely the eye and prevent keratopathy associated without developing any adverse reactions and avoiding surgery with a safe and easy procedure

# **Discussion**

## Conclusion

The injection of hyaluronic acid gel in the upper eyelid after a facial palsy is a safe and costeffective procedure in the management of lagophthalmos and helps control keratopathy associated

# References

# Abstract: 219 - Date: 2019-06-30 19:34:51pm

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# **Topic of Summary**

PRM in paediatric problems

## **Title of Summary**

The first intramedullary bone lengthening procedure in a paediatric patient in Portugal – presentation of a protocol of rehabilitation

# **Keywords**

Lower limb hypometry; intramedullary bone lenghening; Fitbone

#### **Authors**

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# Introduction

Present the first clinical case of intramedullary bone lengthening using Fitbone® on a paediatric patient in Portugal and describe the protocol of rehabilitation implemented by the PMR team.

## **Materials & Methods**

We describe the case of an 11 year old girl with left lower limb hypometry secondary to osteomyelitis of distal femur and proximal tibia, after knee septic arthritis at 18 months old. The patient underwent multiple surgeries including applications of Ilizarov external fixator for correction of genu valgum. By the end of 2018, the patient had a lower limb length discrepancy of 5.8cm. \r\nBefore this surgery, the authors researched this kind of lengthening device and rehabilitation practices to design a rehabilitation protocol. Right after the surgery, the patient began physiotherapy treatments in the PMR department with regular evaluations of assistant physiatrist.

#### Results

The applied protocol had three phases associated with the orthopaedic stages: the initial rehabilitation, distraction and consolidation phases, with the ultimate goals of returning to full weight bearing and normal functional level. The distraction phase started at day 3 post-surgery, at a rate of 1mm/day. The patient had physiotherapy 3 times a week with an experienced professional and at-home exercise. The lengthening finished after 3 months, with a gain of 6cm, without complications to date.

#### Discussion

## Conclusion

Intramedullary nail for bone lengthening has numerous advantages compared to the external fixators, including faster correction of deformities and bone shortening. These devices are less traumatic for the child, allowing early return to daily activities and increased quality of life.

#### References

# Abstract: 220 - Date: 2019-06-30 19:50:26pm

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# **Topic of Summary**

Rehabilitation services in Mediterranean countries and Africa

## **Title of Summary**

\"Employment Barriers Questionnaire\": Development and determining reliability and validity among people with disabilities

# Keywords

vocational rehabilitation, barriers for work

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# Introduction

To develop and examine the reliability and validity of the \"Employment Barriers Questionnaire\" (EBQ) to identify barriers to employment among people with disabilities (PWDs).

## **Materials & Methods**

Study sample included 35 inpatient and outpatient subjects with physical disabilities. Of these, 51% were employed during the study period. The subject\'s average age was 46.1 years (SD=10.6 years). The subjects completed the employee version of the EBQ, the "Short-Form Health Survey Questionnaire" (SF-36), which measures health-related quality of life; and the "Work related Self-efficacy Scale" (WSS-37), which examines self-efficacy at work. Internal reliability and test re-test reliability were examined. To examine the convergent validity of the questionnaire, the researcher performed workplace observations for 15 subjects and then completed the occupational therapist's version of the EBQ, which was compared to the employee version. Construct validity was determined by examining the differences in the results of the questionnaire between disabled employees and unemployed

disabled subjects. Concurrent validity was examined by the connection between the EBQ, the SF-36 and WSS-37.

#### Results

Internal reliability ( $\alpha$ =.89-.95) and test re-test reliability (ICC=.85-.94, p<.001) were high for most of EBQ's parts. Moderate-strong convergent validity (r =.57-.86, p<.05), construct validity (t=-3.96, p<.001) and weak to moderate concurrent validity (r=-.34-.57, p<.05) of the EBQ were found.

#### **Discussion**

#### Conclusion

The EBQ may help in identifying barriers to employment of PWDs and therefore it has the potential of enhancing the integration of PWDs in the workplace.

#### References

# Abstract: 227 - Date: 2019-06-30 20:31:02pm

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#### **Topic of Summary**

Special therapeutic methods in PRM

# **Title of Summary**

Physical exercise after traumatic brain injury: a systematic review

# **Keywords**

Physical exercise, Traumatic brain injury, Rehabilitation

## **Authors**

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# Introduction

Traumatic brain injury (TBI) patients usually have exercise levels below the lowest levels of similar age and sex adults. Additionally, there has been little research about the long-term benefits of physical activity in this population. The primary objective of this study is to conduct a systematic review evaluating the role and benefits of exercise in TBI patients. The secondary objectives were to evaluate safety and general principles of exercise prescription (frequency, intensity, duration, type and progression) in this group of patients.

#### Materials & Methods

A systematic search of the PubMed database was performed between May and June 2019. Search keywords used were: "physical exercise" (and) "traumatic brain injury" (and) "fitness training". Studies were selected if they were in English. In addition, reference lists from systematic reviews were also analyzed.

## Results

A total of 29 publications were identified. Upon removal of duplicates and screening of abstracts, 8 citations did not meet our inclusion criteria and were considered not relevant.

#### **Discussion**

## Conclusion

There is preliminary evidence that TBI patients who exercise regularly experience improvement of aerobic fitness and cardiovascular capacity. Evidence suggests a positive effect of physical exercise on global cognitive functioning, especially chronic stages. In addition, exercise seems to improve mood, social participation and quality of life among these patients. Time of injury and training program duration must be considered when prescribing exercise for people with TBI.\r\nHowever, well-designed studies are still needed, to provide better understanding about the effect the physical exercise and to validate exercise prescription guidelines in this population.

#### References

# Abstract: 228 - Date: 2019-06-30 20:37:30pm

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# **Topic of Summary**

Special body function problems e.g. spasticity, urinary system, sexuality, dysphagia, speech disorders and others

# **Title of Summary**

Pain in amputee patients

#### **Keywords**

limb amputation, pain management, rehabilitation

# **Authors**

Emna Toulgui; Meryem Frigui; Sahbi Mtaouaa; Hamdi Gares; Meriam Gaddour; Walid Ouaness; Sonia Jemni; Fayçal Khachnaoui

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#### Introduction

In literature, few studies focused on the pain of amputation stumps, although these are in direct contact with the equipment and are the location of several specific pathologies. In this study, we are interested in the pain of the amputation stump and its management.

#### **Materials & Methods**

This descriptive study included all hospitalized amputee patients at the PMR Department Sahloul

#### Results

Thirty three patients were included. The average age was 53.82 years .The patients were diabetic in 69.7%. Amputation was trans-tibial in 75.8% of cases.\r\nNeuropathic pain was found in 30.3% of cases. These pains required surgical treatment of the neuroma in 6% of cases.\r\nNeuropathic pain was reported in 75.7% of cases with an average DN4 score of 4.8 / 10. These pains were effectively cured by neuroleptics (pregabalin and gabapentin) as monotherapy in 27.3% also 15% of patients were improved with antidepressant treatment. A second-line combination of these 2 molecules was effective in 9.1% of cases. A phantom limb sensation was found in 57.6% of cases, of which 23.4% was painful with a mean pain VAS scale of 53.5 / 100. Two-thirds of the patients underwent functional rehabilitation with mirror therapy with reduced pain.\r\nAn algodystrophy of the amputation stump occurred in 6% of cases and significantly delayed the fitting in all cases.\r\n

#### **Discussion**

## Conclusion

A limb amputation is often complicated by amputation stump pains. These pains vary according to the degree of trauma preceding the surgical procedure and preoperative pain. Proper management of these pains depends on their causal etiology.

#### References

# Abstract: 229 - Date: 2019-06-30 20:41:49pm

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#### **Topic of Summary**

Special body function problems e.g. spasticity, urinary system, sexuality, dysphagia, speech disorders and others

## **Title of Summary**

Bladder dysfunction in multiple sclerosis

#### Keywords

Multiple sclerosis, Bladder dysfunction, Urodynamics

#### **Authors**

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#### Introduction

Multiple sclerosis (MS) patients frequently experience sequelae of the disease in the urinary tract, which may present an increased risk of renal failure if not properly addressed and managed. The present study aimed to evaluate bladder dysfunction in MS patients and identify the impact of cystomanometry results in voiding regimen.

#### **Materials & Methods**

A cross-sectional study including MS patients admitted in a specialized rehabilitation centre between January 2016 and June 2019. Patients that performed cystomanometry were included. Age, gender, type, duration of disease progression, Kurtzke Expanded Disability Status Scale (EDSS) scores, urinary symptoms, voiding regimen and cystomanometry and renovesical ultrasound results were assessed.

#### Results

39 patients with MS, 24 females, with an average age of  $44,57 \pm 11,8$  years were enrolled. The mean score of EDSS was  $5,91 \pm 1,53$  and the mean duration of MS was  $12,8 \pm 9,32$  years. \r\nAt admission, only 7,7% of patients were performing intermittent catheterization and 5,1% were wearing chronic indwelling urethral catheters. Urge incontinence was the predominant urinary symptom reported (48,3%), followed by feeling of incomplete emptying (20,7%). Abnormalities in cystomanometry were observed in 76,9% of patients, 23% of them asymptomatic and 25,7% with normal renovesical ultrasound. Detrusor overactivity was the predominant bladder dysfunction, present in 48,7% of them. After the cystometry, the approach of intermittent catheterization was applied to 30,8% of the patients.\r\n

# **Discussion**

#### Conclusion

Our data suggests that urodynamic analysis should be systematically performed in patients with MS, allowing early detection and optimization of bladder dysfunction, avoiding potentially harmful urinary complications.

#### References

Abstract: 232 - Date: 2019-06-30 20:49:48pm

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# **Topic of Summary**

Special body function problems e.g. spasticity, urinary system, sexuality, dysphagia, speech disorders and others

## **Title of Summary**

Psychological and functional impact of pain in amputees

## **Keywords**

limb amputation; pain management; anxiety; depression; functional dependance

## **Authors**

Emna Toulgui; Meryem Frigui; Rihab Moncer; Hamdi Gares; Sahbi Mtaouaa; Khaled Maaref; Sonia Jemni; Fayçal Khachnaoui

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## Introduction

The body image is the mental representation of the body. During an amputation, the body image is modified. This change can be more or less difficult to accept especially with pathologies affecting the stump.

# **Materials & Methods**

A retrospective study that included all amputee patients hospitalized at PMR of Sahloul over the past 2 years. Depression and anxiety were assessed by the HAD scale: Hospital Anxiety and Depression scale. The functional impact was measured by the FIM score: Functional independence measure.

# Results

Thirty-three patients were included. The average age was 53.8 years with a sex ratio H / F = 3.1. Anxiety (HADanx $\geq 11$  / 21) was objectived in 48.5% of patients and depression (HADdep $\geq 11$  / 21) in 45.5% of patients. The average FIM score was 95.67 / 126 [62.120].\r\nA very significant correlation (p <0.01) between the decrease in the FIM score and age, gender, the presence of neuroma, ghost sensation, the existence of a knee, depression and anxiety.\r\nWe found a statistically significant relationship between anxiety and neuromuscular pain (p = 0.026) and also with ghost perception (p = 0.001).\r\nWe also found a significant correlation between the occurrence of depression and the neuromuscular pain and phantom pain (p = 0.001, p = 0.002).\r\n

## Discussion

# Conclusion

Mood disorders, especially depression, hinder adherence to care and may delay functional recovery in an amputee patient. Their screening and management are crucial during the entire process of managing any amputee patient.

## References

# Abstract: 233 - Date: 2019-06-30 20:54:38pm

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## **Topic of Summary**

Neurorehabilitation, spasticity

## **Title of Summary**

Guillain-Barré syndrome: An unusual presentation of West Nile virus infection

# **Keywords**

#### **Authors**

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#### Introduction

To describe a case of a WNV infection complicated by a GBS.

# **Materials & Methods**

To describe a case of a WNV infection complicated by a GBS

#### Results

This is a 54-year-old patient presenting to the emergency department for heaviness and tingling sensation of the lower limbs in an infectious context of viral infection. The evolution was marked by a dysphagia, a dysphonia then an acute respiratory insufficiency. The motor deficit has worsened in an upward and symmetrical way. The patient required mechanical ventilation. Clinical examination had found flaccid quadriplegia with preserved sensitivity without meningeal signs or damage of the cranial nerves. Magnetic resonance imaging showed contrast enhancement of the nerve roots of the ponytail in favor of polyradiculoneuropathy and electroneuromyogram showed demyelinating polyneuropathy. The diagnosis of a GBS was confirmed and the patient received immunoglobulins. In the context of an etiological survey and given the epidemiological context, a WNV urinary PCR was requested and returned positively. After two months of hospitalisation in physical medicine department, the patient returned to her home after recovery.

## **Discussion**

# Conclusion

Secondary GBS at WNV is a very rare clinical entity. Previous studies described flaccid paralysis, but demyelinating neuropathy has been recently documented. As a result, the New York Department of Health recommends that patients with Guillain Barré Syndrome have to be screened for WNV.

# Abstract: 235 - Date: 2019-06-30 21:03:19pm

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## **Topic of Summary**

Special body function problems e.g. spasticity, urinary system, sexuality, dysphagia, speech disorders and others

# **Title of Summary**

Obstacles to applying prosthesis in amputees

# **Keywords**

limb amputation; rehabilitation; prothesis; obstacles

#### **Authors**

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Department of Physical Medicine and Functional Rehabilitation of Sahloul TUNISIA

# Introduction

The amputation of a lower limb cause a physical and psychological impairement. Management is based on functional rehabilitation and adapted equipment. The latter can be made difficult or delayed by certain factors specific to the stump and the patient. This study aims to determine the factors hindering the amputee\'s equipment.

# **Materials & Methods**

This retrospective study analysed the results of 33 amputee patients hospitalized at the PMR Department of Sahloul.

## **Results**

We included in our study 33 patients, aged on average 53.8 years [11-87] with a sex ratio H / F = 3.1. We estimated that 36.4% had an average socio-economic level. Amputation followed an infectious etiology in 51.5% of cases, ischemic in 30.3% and traumatic in 18.2%. The level of amputation was trans-tibial in 75.8% of cases, trans-femoral in 15.2% of cases, Chopard joint in 3% of cases. Two patients (6%) had upperlimb amputation.\r\nTwelve patients could not be fitted. Several factors had separately or jointly hampered the equipment. In fact, the absence of equipment was significantly correlated with certain factors such as the lack of social coverage , the presence of a bone projection , the flexion of the hinged joint., poor padding, neuromuscular pain , phantom limb perception , anxiety developed in the aftermath of amputation and depression.\r\n

#### Discussion

## Conclusion

Post-operative complications following amputation are unfortunately not uncommon, particularly pain and poor quality of the stump, and must be the subject of a specialized assessment and management, to allow a quality equipment and in the usual deadlines.

#### References

# Abstract: 237 - Date: 2019-06-30 21:11:18pm

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# **Topic of Summary**

Neurorehabilitation, spasticity

# **Title of Summary**

Serious traumatic brain injury: clinical and epidemiological profile

# Keywords

traumatic brain injury; orthopedic disorders; neurogenic osteoarthropathies; epidemiology

# **Authors**

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# Introduction

Serious traumatic brain injury (TBI) can be a major source of disability due to neurological involvement and inherent complications. This work aim to determine the epidemiological-clinical profile of traumatic brain injury and the main complications of TBI.

## **Materials & Methods**

Descriptive study included all TBI patients hospitalized at the PMR Department at Sahloul Tunisia during 4 years. We determined the epidemiological, clinical and functional data.

#### Results

Sixty six patients hospitalized in PMR at the exit of the intensive care unit were included. The average age was 32.2 years with a clear male predominance. Polytrauma was associated with TBI in 42.4%. Concerning the waking state, a relationship state was found in 24.2%. The

evaluation of higher functions revealed memory disorders in 33.3% and temporal-spatial disorientation in 21.2%. We found a Mini Mental State Examination score (MMSE) ≤24 / 30 (severe cognitive dysfunction) in 48%, and between 24 and 27/30 in 8%. Deglutition disorders were objectified in 40.6%. In clinical terms, troublesome spasticity was noted in 60.6%. Neuro-orthopedic disorders were found in 69.7% of patients, mainly neurogenic osteoarthropathies in 51.5%. Bladder disorders were objectified in 42.4%. The functional impact was assessed by the Functional Independence Measure (FIM) score, 78.8% of the patients had a FIM score of 100/126. Depression was noted in 45.5% and anxiety in 30.3%.

## Discussion

## Conclusion

TBI is a major public health problem. Neuro-orthopedic disorders, memory disorders, bladder disorders, depression and functional repercussions are the main complications of TBI.

## References

# Abstract: 238 - Date: 2019-06-30 21:14:29pm

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## **Topic of Summary**

Neurorehabilitation, spasticity

# **Title of Summary**

Recovery after peripheral facial paralysis: the role of physical therapy

#### **Keywords**

facial paralysis; physical therapy; neurorehabilitation

## **Authors**

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#### **Affiliations**

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# Introduction

Peripheral facial paralysis is commonly treated by physical therapy, but there is still lack of high-quality evidence to support its efficacy. The aim of this study is to evaluate physical therapy outcomes for individuals with peripheral facial paralysis, in terms of grade of recovery of function.

# **Materials & Methods**

From May 2018 to April 2019, a sample of 10 patients with the diagnosis of Peripheral Facial Paralysis were evaluated in our department. These patients were enrolled in a program of

physical therapy that included patient education, massage, neuromuscular training and mime therapy. The participants were evaluated before and after the treatment, using the House-Brackmann scale (HBS) and the Facial Disability Index (FDI), for physical and emotional function, when applicable.

#### Results

There were 10 patients (7 males and 3 females). The mean age was 50,5 years. The average grade of HBS before the treatment was 4,4 and after the treatment was of 1,44. The average physical function score assessed by the FDI before the treatment was 60,83 and after was 108,43. The average social/well-being functional score assessed by the FDI before the treatment was 42,67 and after was 46,86.

#### Discussion

## Conclusion

In this study, there was statistically significant improvements after facial rehabilitation. All the patients improved in terms of motor function, using both the HBS and the FDI for physical function. There was also a slight improvement in the FDI social/well-being score. Physical therapy appears to be effective in improving facial motor function and fasten recovery. A larger study, however, is needed.

#### References

# Abstract: 241 - Date: 2019-06-30 21:24:11pm

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## **Topic of Summary**

Special therapeutic methods in PRM

## **Title of Summary**

Risk associated with the treatment with PRGF in patients with musculoskeletal pathology

## **Keywords**

PRGF; MSK; Rehabilitation

## **Authors**

Carmen María Pérez; Isabel Carnicero; Sarai Santiago; Alejandro Trujillo; José Luis Pérez.

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#### Introduction

Identify the risks associated with the treatment with autologous PRGF in patients with musculoskeletal pathology.

#### **Materials & Methods**

This is a retrospective observational study in which a total of 355 patients with musculoskeletal pathology were recruited. Three echoguided infiltrations were made in those patients who presented the ideal characteristics for treatment with PRGF. Likewise, the adverse effects presented were collected

#### Results

The average age of the study population was 46.3 years (+/- 11.23). The participants were 67.9% of men and 32.1 of women, with a total of 1056 procedures. A 0.85% of the participants were excluded due to active infections (HCV and Syphilis). There were 21 cases of mild adverse reactions at the local level and 5 cases of adverse reactions at the systemic level.

# Discussion

#### Conclusion

The use of PRGF is a safe technique due to its few and slight adverse effects. However, in its indication we must bear in mind the intrinsic characteristics of each individual and the current regulations for its application.

## References

# Abstract: 242 - Date: 2019-06-30 21:25:44pm

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# **Topic of Summary**

Special therapeutic methods in PRM

# **Title of Summary**

Management of Frey Syndrome Using Botulinum Toxin

#### Keywords

Frey syndrome, botulinum toxin

# **Authors**

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# **Affiliations**

Physical and Rehabilitation Medicine Department, Centro Hospitalar Entre Douro e Vouga, Portugal

#### Introduction

To describe a case of Frey syndrome (FS) managed with botulinum toxin (BT).

#### **Materials & Methods**

Description of a post-parotidectomy FS. A brief review of the literature was made, by searching Pubmed, Medline, Cochrane.

#### Results

A 43-year-old woman presented with flushing, burning and sweating in the left preauricular area that started months after a left parotidectomy. This symptoms were kept under vigilance by 4 years, when an evaluation by Physical Medicine and Rehabilitation was requested. Symptoms made her feel socially uncomfortable and negatively affected her quality of life (QoL). We performed Minor test, confirming the diagnosis. We then injected the affected area with BT/Botox® (46UI). At follow-up, 3 weeks later, symptoms were absent. A new injection is programmed for when symptoms recur.\r\nFS results from an abnormal reinnervation of auriculotemporal nerve fibres following injury to this region, most commonly after parotidectomy. Treatment is indicated when it negatively influences QoL. Surgical or conservative approaches may be used but BT is the preferred treatment. The effects are temporary, lasting longer than when BT is used to treat spasticity. Adverse effects related to the procedure are pain, redness, bruising, allergy, xerostomia and rarely facial palsy.

#### Discussion

# Conclusion

Although FS is relatively common in the post-surgical context, symptoms are reported in only 10-15% of patients. Physicians must be aware of this diagnosis in order to provide patients an adequate treatment. BT is a simple, safe and effective procedure.

## References

# Abstract: 243 - Date: 2019-06-30 21:26:45pm

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# **Topic of Summary**

Orthotics and prosthesis in PRM

## **Title of Summary**

Rehabilitation Challenges after Hip Disarticulation in a Young Burned Patient

# Keywords

Prosthetic rehabilitation, Hip disarticulation, Burn rehabilitation

#### **Authors**

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## Introduction

Major burns impact patients physically, psychologically and emotionally. Despite being rare, limb amputation in this setting leads to increased difficulties in their rehabilitation process and is associated with poorer outcomes. This paper aims to describe a complex successful case of hip disarticulation in a patient with extent burn lesions treated in a rehabilitation center.

#### **Materials & Methods**

We reviewed the clinical records of a patient treated in a rehabilitation centre who underwent hip disarticulation in the setting of major burn.

#### Results

A previously healthy 20-year-old female was admitted in a Burn Unit with severe burns affecting 60% of total body surface area, after a forest fire. The patient underwent multiple grafting procedures and disarticulation of the right hip due to irreversible ischemia, presenting also with severe sensory-motor axonal polyneuropathy in the contralateral limb and severe deconditioning. After seven months, she was admitted in CMRA for inpatient rehabilitation, integrating a global multidisciplinary rehabilitation 3 month program aiming to improve range of motion, stump desensitization, pain control and gait training with prosthesis. At discharge, the patient was totally functional with the upper limbs and was able to walk using prosthesis and a rigid ankle-foot orthosis with two crutches at a modified independent level.

## Discussion

#### Conclusion

Burned patients rehabilitation is complex, especially when associated with other comorbilities. Although the prosthetic rehabilitation after hip disarticulation is challenging, successful outcomes are achievable, including optimized prosthetic fitting and use. A dynamic approach through intensive wound care, contracture/pain management and psychological support is crucial.

# References

Abstract: 247 - Date: 2019-06-30 21:34:31pm

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## **Topic of Summary**

PRM in paediatric problems

## **Title of Summary**

An unusual association of Klippel Feil Syndrome (KFS) and psychomotor delay: A Rare Case Report

## Keywords

KFS; psychomotor delay

#### Authors

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#### Introduction

The term Klippel–Feil syndrome was originally used to describe the clinical triad of fused cervical vertebra, short neck and low posterior hairline; however, now the term is used more broadly for cervical fusion.\r\nThe association with psychomotor delay was not described before, as we know. \r\n

## Materials & Methods

We report the case of a case of a 3 years old girl, who was referred to our Physical Medicine and Rehabilitation department for psychomotor delay, and was diagnosed as having KFS.\r\n

#### Results

A 3 years old female patient; born to a healthy related couple with a second degree of consanguinity, was referred to our Physical Medicine and Rehabilitation department for psychomotor delay and facial asymmetry. On examination, she had a short neck, a low posterior hairline, a left side torticolis, thoracic hyperkyphosis and left peripheral facial paralysis.\r\nX-ray cervical spine showed fusion of C2-C3 with congenital defects of the C7 posterior arch. So the diagnosis of KFS was confirmed.\r\nOur patient was managed with a rehabilitation program consisting of cervical spine strengthening exercises, a psychomotor training program as well as an occupational therapy \r\n

# **Discussion**

#### Conclusion

Patients with KFS should be assessed for associated systemic abnormalities beside cervical fusion. The combination with psychomotor delay such in our patient was not reported before. So the originality of this case.

## References

Abstract: 248 - Date: 2019-06-30 21:36:09pm

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# **Topic of Summary**

Neurorehabilitation, spasticity

# **Title of Summary**

Memory disorders in severe traumatic brain injury

# **Keywords**

traumatic brain injury; memory disorder; MMSE

#### **Authors**

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Department of Physical Medicine and Functional Rehabilitation of Sahloul TUNISIA

# Introduction

Achievement of higher functions is often found in severe traumatic brain injuries (TBI) with significant motor sequelae. The neuropsychological evaluation must be systematic and complete. The purpose of this work was to evaluate the cognitive functions and memory capacity of TBI patients.

## **Materials & Methods**

Retrospective descriptive study that included TBI patients hospitalized at the PMR Department of Sahloul between 2015 and 2018. The Mini Mental State Examination (MMSE) score was used.

# Results

51 patients were included. The average age was 33.8. A clear male predominance was noted. The presence of associated comorbidity was found in 12.1% . The mean evolution of head injury was 2.55  $\pm$  1.9 months. We found polytrauma associated with severe head trauma in 42.4%. Memory disorders were found in 22 patients and temporospatial disorientation in 14 patients. The MMSE score was used to evaluate higher functions. We found a Mini Mental State Examination score (MMSE)  $\leq$ 24 / 30 (severe cognitive dysfunction) in 48%, and between 24 and 27/30 in 8%.\r\nWe noted that the cerebral CT was performed in the acute phase: 31.37% of patients had meningeal haemorrhage, 13.72% had a subdural hematoma and 11.76% had extradural hematoma. Cerebral MRI revealed diffuse axonal lesions in 7.84%.\r\n

# Discussion

## Conclusion

Higher functions disorders and especially memory troubles represent a brake with the recovery of the severe traumatic brain injurie. This is as difficult for the patient as for his family. Specialized and adequate management of these disorders would promote recovery in the TBI patient.

#### References

# Abstract: 249 - Date: 2019-06-30 21:40:48pm

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# **Topic of Summary**

Neurorehabilitation, spasticity

## **Title of Summary**

Psychological impact and functional impairment of severe traumatic brain injury

# **Keywords**

traumatic brain injury; anxiety; depression

#### **Authors**

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#### Introduction

Severe traumatic brain injury is a major cause of disability. The latter is often associated with depressive symptoms that impair the ability to recover and rehabilitate. Thus, the objective of this work was to detect post traumatic mood disorders, to determine their functional impact and to determine associated risk factors.

#### **Materials & Methods**

A retrospective descriptive study of all patients with severe TBI hospitalized at the PMR Department of Sahloul Tunisa. The functional evaluation was made by Functional Independence Measure (FIM) and psychological score by Hospital Anxiety and Depression Scale (HAD) score.

#### Results

66 patients aged 32.21 with a clear male predominance were included. Associated comorbidities were found in 12.1% of cases. The functional outcome was assessed by the FIM score, 78.8% had a FIM score of ≤100 / 126 and 21.2% had a FIM score between 101 and 126. Depressive symptomatology was noted in 45.5% (HAD dep≥11 / 21) and anxiety in 30.3% (HAD anx ≥11 / 21).\r\nFour patients passed away.\r\nThere was a statistically significant correlation between functional limitation and age, presence of memory disorder , spasticity, neuro-orthopedic disorders occurence and persistence of bladder disorders.\r\nThere was also an association between depression occurrence and young age, memory disorder, spasticity, neuro-orthopedic disorders occurence, persistence of bladder disorders and a score of MIF≤100.\r\n

## Discussion

## Conclusion

The determination of the factors associated with the psychological and functional impact of TBI makes it possible to better plan their management and improve their functional prognosis.

#### References

# Abstract: 251 - Date: 2019-06-30 21:53:12pm

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# **Topic of Summary**

PRM in orthopaedics and musculoskeletal disorders

# **Title of Summary**

Upper limb musculoskeletal disorders in physiotherapists

# **Keywords**

#### **Authors**

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# Introduction

Musculoskeletal disorders (MSD) are growing exponentially. They represent the first occupational disease in Tunisia. Theses pathologies include a wide range of disorders that frequently affect the upper limb. The physiotherapist treats these affections, but he is as concerned as the rest of the population by these disorders. This work aims to evaluate upper limb MSD among physiotherapists.

## **Materials & Methods**

Descriptive transversal study conducted in February 2019 covering 70 physiotherapists exercising in Sousse (35 at Sahloul hospital/35 in private cabinet). Were noted sociodemographic data and circumstances of work by using a self-administered questionnaire, and a complete clinical exam was done.

#### Results

The mean age was 33.6 ï, $\pm$  7.6 [22-50 years]. The dominant hand was the right hand for 84.3%. All physiotherapists worked 6 days / 7 with an average number of hours was 6.5 hours per day. The mean number of patients in care was 8ï, $\pm$ 2 patients per day.\r\n\r\nAt the last 12 months, more than half of our physiotherapists (n = 37) had shoulder MSDs (right cuff tendinopathy, bilateral cuff tendinopathy, left cuff tendinopathy), 14.29% (n = 10) suffered

from elbow (epicondylitis/epitrochleitis) and 51.43% (n = 36) suffered from hand (Quervain tenosynovitis, thumb extensor tendinitis, carpal tunnel or rhizarthrosis).\r\n

## **Discussion**

#### Conclusion

Physiotherapists commonly treat patients suffering from MSD and also have high risks to develop these disorders. The handling of patients, the repetition of movements, the force developed during the management and the constraining postures, are all elements which expose them to high risks of occurrence of upper limb MSD.

#### References

# Abstract: 252 - Date: 2019-06-30 21:56:59pm

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## **Topic of Summary**

Special therapeutic methods in PRM

# **Title of Summary**

Inquiry among general practitioners' knowledge regarding clean intermittent selfcatheterization

# **Keywords**

## **Authors**

Borgi Ons<sup>1</sup>; Herchi Wafa<sup>2</sup>; Moncer Rihab<sup>1</sup>; Jemni Sonia<sup>1</sup>; Khachnaoui Fayçal<sup>1</sup>

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# Introduction

To assess general practitioners (GP)' state of knowledge regarding clean intermittent self-catheterization (CISC)

## **Materials & Methods**

A direct questionnaire, oriented on the knowledge of CISC, was sent by email to 25 GP in exercise of profession. The questionnaire consists of 11 questions that deal with the definition of CISC, the modalities of realization, the indications of a cytobacteriological examination of the urine and antibiotic therapy and the complications of this mode of drainage. We studied the responses of the GP and we calculated the average responses for each question

#### Results

Two-thirds of GP gave an exact definition of CISC, while 16% confuse it with the indwelling catheter. Sterile gloves were needed for 20% of physicians. An antiseptic was prescribed by 48% of the GP. Hematuria and infection were considered the main complications of CISC by 75% and 50% of physicians, respectively. In the absence of signs of call, 16% of GP required a systematic cytobacteriological examination of the urine in these patients. If the latter is positive, antibiotic therapy was prescribed in 28% of cases. In the case of urinary tract infection, two-thirds of the doctors prescribed low-dose antibiotic therapy for patients with CISC and 20% prescribed 15 days of treatment.

#### Discussion

#### Conclusion

The CISC must be better known by GP who ensure the home follow-up of these patients. Complementary training of GP in this method of drainage associated with the education of patients and an attentive personalized medical follow-up make it possible to take optimal care of patients with neurological bladder under CISC.

#### References

# Abstract: 253 - Date: 2019-06-30 21:58:24pm

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# **Topic of Summary**

PRM in orthopaedics and musculoskeletal disorders

## **Title of Summary**

Professional neck pain in physiotherapists

# Keywords

#### **Authors**

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## Introduction

Musculoskeletal disorders (MSD) include various pathologies of occupational origin that can affect the locomotor system of workers. Among health professionals, physiotherapists, because of their professional requirements, are concerned of these disorders. In this context, our work focuses on studying in particular MDS affecting cervical spine of this population.

#### Materials & Methods

Descriptive transversal study conducted in February 2019 covering 70 physiotherapists exercising in Sousse (35 at Sahloul hospital/35 in private cabinet). The socio-demographic data were collected by a pre-established self-administered questionnaire, a clinical exam was done for all our candidates and a complement of radiological scanner was made according to clinical context and anamnesis.

#### Results

Included physiotherapists mean age was 33.6  $\ddot{r}$ ,  $\pm$  7.6 years. The sex ratio H / F = 0.52. Working seniority was ranged from 2 to 25 years, with a mean of 8  $\ddot{r}$ ,  $\pm$  6 years.\r\nAt the last 12 months, thirty-one (44.29%) of physiotherapists reported MSD affecting the cervical spine; 24 patients had neck pain and 7 patients had cervico brachial neuralgia.\r\nThe radiologic exam objectived herniated disc in 2 patients.\r\nThe analytical study did not show any correlation between seniority, work schedule and neck pain.\r\n

#### **Discussion**

## Conclusion

The MSD affecting cervical spine can hinder normal and professional activity, which justifies the interest of implementing a preventive strategy concerning the organization of work, the equipment used and the layout of the post in order to provide the practitioner with the necessary comfort, efficiency and work safety.

## References

# Abstract: 255 - Date: 2019-06-30 22:02:55pm

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# **Topic of Summary**

PRM in orthopaedics and musculoskeletal disorders

## **Title of Summary**

Low Back Pain among Physiotherapists

# **Keywords**

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## Introduction

On their daily practice, physiotherapists are required to repeat certain movements, to exercise significant force and to work in uncomfortable postures. All of these factors contribute to the onset of low back pain in the workplace.

#### **Materials & Methods**

Descriptive transversal study conducted in February 2019 over 70 physiotherapists exercising in Sousse. A pre-established self-administered questionnaire collected socio-demographic data and grievances, followed by clinical exam and radiological assessment as needed.

#### Results

Seventy physiotherapists were included, 35 practicing in 11departments in Sahloul hospital and 35 practicing in private practices.\r\nThe mean age was 33.6 ï,± 7.6 years. The sex ratio H / F was 0.52.\r\nDuring the past 12 months, forty-two (60%) physiotherapists reported low back pain while exercising their occupation. Among these patients, 8 had lumbosciatica. After radiologic exam, a disco-radicular conflict was objectified in 5 patients.\r\nDuring the previous year, a work stoppage more than 30 days was prescribed to 15 physiotherapists (21.43%) and 32 (45.71%) reported that these disorders significantly affected their daily activities.\r\n

#### Discussion

## Conclusion

Low back pain in the workplace has a high socio-economic and professional cost, so it would be interesting to develop major prevention strategies for this population at risk and to propose real practical solutions.

#### References

# Abstract: 258 - Date: 2019-06-30 22:15:24pm

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# **Topic of Summary**

PRM in orthopaedics and musculoskeletal disorders

# **Title of Summary**

Nontraumatic Spinal Neurological Compressions: Evaluation of Functional Prognostic Factors

## **Keywords**

Nontraumatic Spinal Neurological Compressions, Functional Prognostic Factors

#### **Authors**

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#### **Affiliations**

PMR Sahloul Sousse TUNISIA

#### Introduction

Retrospective descriptive and analytical study that included 97 hospitalized patients in the PMR departement Sahloul Tunisia, from 2010 to 2018.

## **Materials & Methods**

Retrospective descriptive and analytical study that included 97 hospitalized patients in the PMR departement Sahloul Tunisia, from 2010 to 2018.

#### Results

The average age was 47.5 with male predominance. At the time of diagnosis, 95% of patients had a motor deficit. Sensory disorders and vesico-sphincter disorders were observed in 52% of patients.\r\nThe majority of patients were admitted with ASIA D grade and MIF ranging from 27 to 122/126. MIF scores at the end of rehabilitation ranged from 33 to 126/126.\r\nFunctional recovery was influenced by the age of the patient and the presence of associated defects. The complications observed in 26 patients were dominated by spasticity, neuropathic pain, urinary tract infections and pressure ulcers. These complications appeared to occur in ASIA patients A, B and C more than those ASIA D.\r\nYoung age, lumbar spinal cord compression, early rehabilitation with sufficient duration and low neurological deficit on admission were factors in good functional recovery.\r\n

## **Discussion**

# Conclusion

Nontraumatic spinal neurological compression is a diagnostic and therapeutic emergency, serious because of the physical deteriorations and functional disorders generated, deserving better evaluation in order to limit the consequences of socio-professional disadvantage.

## References

# Abstract: 261 - Date: 2019-06-30 22:20:48pm

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## **Topic of Summary**

PRM in paediatric problems

# **Title of Summary**

Evaluation of the quality of life of children with neuromuscular disease

## Keywords

quality of life, neuromuscular disease

## **Authors**

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PMR Sahloul Sousse TUNISIA

## Introduction

Neuromuscular diseases are various pathologies in their presentation, their evolution and their respiratory attack. They can be a source of pain and limitation of daily activities, thus affecting the quality of life.

#### **Materials & Methods**

Cross-sectional, descriptive study conducted in April 2019. The quality of life of these children was assessed by QoL-NMD v1.0, which is a specific questionnaire that measures the quality of life in patients with neuromuscular disease slowly progressive.

#### Results

Ten patients were included with an average age of 6 years followed by pediatric neuromuscular services. The average age of our patients at the time of diagnosis was 6 years [9 months to 13 years]. The sex ratio was 1.5.\r\nThe study population was distributed as follows: 6 patients with a Duchenne myopathy chart, 3 patients with spinal muscular atrophy and one patient with belt myopathy.\r\nQuality of life was impaired in the areas of physical activity, social participation and the impact of bodily symptoms. Factors associated with poor quality of life were: low socio-economic status, seniority of evolution, respiratory impairment and lack of functional rehabilitation.\r\n

# **Discussion**

#### Conclusion

Neuromuscular diseases are accompanied by an impairment of the quality of life of the affected child. Factors associated with this impairment should be considered for optimal management of these patients.

# References

Abstract: 264 - Date: 2019-06-30 22:40:30pm

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## **Topic of Summary**

Rehabilitation services in Mediterranean countries and Africa

## **Title of Summary**

Analysis of the clinical evolution of patients with peripheral facial palsy.

## Keywords

peripheral facial palsy (PFP), House-Brackman (HB), SunnyBrook (SB)

## **Authors**

Cordeiro, A,1; Araule jo, A,1; Costa, J,1; Silveira, J,1; Martins, J,1; Pinheiro, P,1

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1 - Physical and Rehabilitation Medicine Department, Centro Hospitalar e Universitale rio de Coimbra, Coimbra, Portugal

# Introduction

Suggestion of an evaluation protocol for patients with peripheral facial palsy (PFP) and the analysis of the clinical evolution of these patients in a PRM service.

#### **Materials & Methods**

During 1 year, patients were followed up in an outpatient clinic in a PRM service. As selection criteria, patients should have been discharged from the outpatient clinic and have at least 2 evaluations. House-Brackman(HB) scale and the SunnyBrook(SB) scale were applied to all patients in all evaluations.

#### Results

33 patients were selected. The mean age was of 50 years old. On average, patients were evaluated in 2.2 consultations. The average waiting time for the first evaluation visit was 14 days. The mean follow-up time was 119 days, with a minimum time of 20 days and a maximum of 789 days. According to the HB scale, patients presented on average 3.3 in the ER and 3.5 on the first apointment; and according to the SB scale a value of 40.6 on the first query. At discharge, on average, patients had a value of 1.2 in the HB scale and in the SB scale a value of 93.9. Of the patients evaluated, 24% had permanent sequelae.

## Discussion

# Conclusion

The presented data regarding the time of follow-up and recovery are similar to those described in the literature. This pathology affects patients of all age groups. The role of rehabilitation is crucial so that the number of patients with sequelae is not higher.

## References

Abstract: 265 - Date: 2019-06-30 22:42:09pm

## Name

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# **Topic of Summary**

Robotics, virtual reality and innovatives techniques in PRM

#### Title of Summary

Literature review of eye-tracking communication device characteristics for post-traumatic brain injury tetraplegic and aphasic patients

## **Keywords**

"eye-tracking", "augmentative and alternative communication (AAC)", "traumatic brain injury (TBI)", "tetraplegia" and "aphasia".

#### **Authors**

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#### Introduction

The purpose of this study is to present a concise explanation of how eye-tracking communication devices (ETCD) operate; describe the device features, patient\'s specificities and multidisciplinary support that influence and may compromise technology effectiveness and efficiency.

# **Materials & Methods**

The data were obtained from Pubmed database from 1990 to 2019, using keywords search combination of "eye-tracking", "augmentative and alternative communication (AAC)", "traumatic brain injury (TBI)", "tetraplegia" and "aphasia".

## Results

The device features that influence patient\'s ability to use it are related to screen size, screen positioning structures and software. Software has a multitude of instruments and icons design that should be selected according to individual needs.\r\nPatient\'s specificities are related to personal communication disorders, comorbidities, age, scholarship and computer literacy.\r\nCommunication disorders resulting from TBI are diverse, including cognitive (attention, memory), visual, linguistic or motor speech disorders.\r\nPatients who will benefit most from ETCD are those who have expressed a need to enhance their communication skills (Beukelman DR et al. Augment Altern Commun. 2007;23(3):230-42).\r\nThe lack of technical support is the main cause of ACC suspension in TBI patients (Fager S et al. Augment Altern Commun. 2006;22(1):37-47).

#### Discussion

## Conclusion

It is of prime importance to set up a training program that assures ETCD technical support and patient, family members and professionals education, especifically speech and language therapists. Further scientific and technological studies will be needed to improve individual communication dysfunctions and expectations.

#### References

# Abstract: 267 - Date: 2019-06-30 22:53:40pm

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## **Topic of Summary**

Special body function problems e.g. spasticity, urinary system, sexuality, dysphagia, speech disorders and others

# **Title of Summary**

Corretation between Stroke Substype and Level of Dysphagia

## **Keywords**

Stroke; Dysphagia; GUSS; Bamford Classification

#### **Authors**

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#### Introduction

Dysphagia is a common complication of stroke. Reports of its frequency in the literature are highly variable and there's still a debate concerning the locations and the prognosis of strokes causing dysphagia. \r\nThe aim of our study is to correlate the presence of dysphagia with the cerebral territory/volume involved.

# **Materials & Methods**

A sample of 301 patients (168 females) admitted to a stroke unit was distributed according to the Bamford Stroke Classification. Dysphagia screening at admission was performed with Gugging Swallowing Screen (GUSS) (0 representing severe dysphagia and 20 no dysphagia). ANOVA (subsequent Bonferroni correction) was used to compare the level of dysphagia between patients with different subtypes of stroke.

#### Results

Patients diagnosed with TACI showed a higher level of dysphagia versus other groups (TACI vs PACI 11,80  $\pm$  6,78 vs 18,74  $\pm$  2,47, p<0,001; TACI vs LACI 11,80  $\pm$  6,78 vs 19,34  $\pm$  2,51, p<0,001; TACI vs POCI 11,80  $\pm$  6,78 vs 16,06  $\pm$  6,48, p<0,001). Patients diagnosed with POCI showed a higher level of dysphagia versus patients diagnosed with LACI (POCI vs LACI 16,06  $\pm$  6,48 vs 19,34  $\pm$  2,51, p=0,012). No differences were found between patients diagnosed with POCI vs PACI (16,06  $\pm$  6,48 vs 18,74  $\pm$  2,47, p=0,128) and between LACI and PACI (19,34  $\pm$  2,51 vs 18,74  $\pm$  2,47, p=1).

# Discussion

## Conclusion

The volume of neural tissue affected seems to correlate with the development of dysphagia and its severity, since TACI patients showed major propensity to developing dysphagia, and on contrary, lacunar strokes showed the lowest incidence this swallowing dysfunction.

#### References

# Abstract: 268 - Date: 2019-06-30 23:00:39pm

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# **Topic of Summary**

Special body function problems e.g. spasticity, urinary system, sexuality, dysphagia, speech disorders and others

# **Title of Summary**

Effects of Posterior Tibial Nerve stimulation for faecal incontinence: systematic review.

# **Keywords**

#### **Authors**

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# Introduction

Introduction:\r\nFecal incontinence occurs in 2-20% of the adult population and mostly affects women over the age of 65. Neurostimulation is the first choice treatment after failed with the conservative way. Posterior tibial nerve stimulation (PNS) is a non-invasive technique of peripheral neuromodulation and has two methods: Percutaneous (PTNS) and Transcutaneous (TTNS).\r\nObjectives: To know, through a bibliographic review, the outcomes of posterior tibial nerve stimulation in faecal incontinence therapies.\r\n

# **Materials & Methods**

Material and methods: Bibliographic search using the search engines: Pubmed, Medline. Inclusion criteria: 1) meta-analyses, systematic reviews and reviews; 2) Language: Portuguese, English and Spanish; 3) in humans; 4) Last 10 years.

# Results

Results:\r\nFrom all the included studies, with 745 subjects, 8 were TTNS, 8 PTNS and 1 of both. The average age was 53 years old. 89% were female and 11% male. Both methods of PNS were well tolerated and safe. 11 studies shows a statistically significant decrease in fecal incontinence episodes. PNS showed similar improvements in bowel function, although PTNS had fewer weekly fecal incontinence episodes. Quality of life improved after stimulation in all studies.\r\n

#### **Discussion**

#### Conclusion

Conclusions:\r\nThe limited number of available studies leaves the true role for PNS unclear. The efficacy of transcutaneous way remains even more untested.\r\nThe heterogeneity of follow-up regimes for PNS makes it difficult to assess exactly the long-term effects. Further work needs to be done on follow-up of patients who benefit with that to accurately assess the duration of efficacy.\r\n

## References

# Abstract: 269 - Date: 2019-06-30 23:05:52pm

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# **Topic of Summary**

Neurorehabilitation, spasticity

## **Title of Summary**

THE ROLE OF PHYSICAL REHABILITATION MEDICINE IN THE EVALUATION OF THE MOTOR FUNCTION IN PARKINSON PATIENTS

## **Keywords**

Motor Function, Parkinson, Rehabilitation, FIM scale

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#### Introduction

Parkinson\'s Disease (PD) is one of most disabling disorders of the central nervous system, and normally is characterized by the impairment of the motor function. Indeed, the assessment of motor function is essential to determine the level of independence of his

patients. This study evaluated if there is differences in motor function according to the type PD: akinetic-rigid (AR) or tremor dominant (T).

## **Materials & Methods**

Patients with PD were classified according to the type in akinetic-rigid or tremor dominant. Subsequently the patients were assessed towards the motor function, according to FIM scale. Independent samples t-test was used to compare the motor function in both group of patients.

### Results

A sample of 51 patients (26 females) was evaluated. No differences were found regarding the age of the participants at the date of evaluation (AR vs T:  $73,79 \pm 10,61$  vs  $74,56 \pm 9,79$ , p=0,675) and regarding disease evolution period (age of diagnostic AR vs T:  $62,07 \pm 11,07$  vs  $68,33 \pm 10,62$ , p=0,519). The patients with tremor dominant PD showed better motor function compared to the akinetic-rigid PD ( $70,86 \pm 18,70$  vs  $74,94 \pm 10,75$ , p=0,014).

## Discussion

#### Conclusion

The primary manifestations of Parkinson's disease are abnormalities of movement, including movement slowness, difficulties with gait and balance, and tremor. Akinetic-rigid PD showed worst motor function when compared with tremor dominant PD. An earlier assessment of this subtype is necessary in order in implement a rehabilitation program.

## References

# Abstract: 270 - Date: 2019-06-30 23:26:46pm

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# **Topic of Summary**

PRM in geriatric conditions

# **Title of Summary**

Rehabilitation and Exercise in Osteoporosis

# Keywords

# **Authors**

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# Introduction

Osteoporosis is a major health problem. Increased bone fragility can lead to fractures, resulting in considerable reduction of quality of life and functionality. The purpose of this review is to evaluate current evidence regarding rehabilitation and exercise in the management of patients with osteoporosis.

## **Materials & Methods**

We conducted a literature review, including articles published between January 2008 and April 2019, using Medline and Cochrane Library databases.

# Results

Current evidence suggests that bone responds positively to impact activities and resistance training. There is growing evidence that exercise is beneficial following hip fracture, with higher-intensity programmes showing promising outcomes. Furthermore, the improvement of muscle strength, mobility and balance, minimises the risk of falls. This is more relevant for patients with limited functional capacity. It is also important to address issues of comorbidity and safety, as well as maintaining a balanced diet and appropriate calcium and vitamin D intake.

# Discussion

#### Conclusion

Specific exercise and rehabilitation guidelines and protocols for bone health are being developed. Individual exercise and rehabilitation prescription must take into account bone health status, co-morbidities, and clinical risk factors for falls and fractures. Post osteoporotic fracture care is also important and may imply the use of different interventions. However, more work is needed to determine optimal exercise components and rehabilitation modalities for these patients.

## References

# Abstract: 271 - Date: 2019-06-30 23:29:47pm

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# **Topic of Summary**

PRM in orthopaedics and musculoskeletal disorders

## **Title of Summary**

Low back pain in elderly patients: update 2019

# Keywords

Low back pain; elderly; quality of life; osteoporosis; polymedication.

## **Authors**

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#### Introduction

Low back pain in people over the age of 70 is mostly secondary to osteoporosis. Recurrences are not excluded. The purpose of our work is to provide the clinical profile of these patients and to study the factors that degrade their quality of life.

## **Materials & Methods**

Retrospective observational study from 2012 to 2019, in elderly patients (≥70 years old), n = 95, who consult for low back pain or back pain.\r\nMeasurement parameters: EVA-pain scale, type of pain; Quality of life score: SF36; Bone densitometer.

#### Results

Average age 76.6 years; a sex ratio = 0.36; 41 (43%) patients with lumbar spine pain and 51 patients (53.1%) with sciatica.46 patients with osteoporosis (48.4%). 9 patients with neuropathic pain and 84 with nociceptive pain. 22 patients (23.1%) have at least two defects (HTA and NIDDM) and more than 45 patients (47.3%) are taking poly drugs. The average pain at first visit is estimated at 72 mm; SF36 Physics = 27.94 and SF36 mental = 32.37.Our series of geriatric patients (age  $\geq$  70 years), spinal pain coincides with the existence of osteoporosis and the presence of comorbidity (and polymedication related to an abusive prescription).

## Discussion

#### Conclusion

The quality of life of seniors is significantly degraded, when low back pain grafts the difficult experience of those who have comorbidities and in particular treated with various medications with sometimes heavy side effects. we recommend early multidisciplinary management and rational use of all types of medication, to preserve a better quality of life.

# References

# Abstract: 272 - Date: 2019-07-01 22:18:17pm

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# **Topic of Summary**

Orthotics and prosthesis in PRM

# **Title of Summary**

Total hip arthroplasty: what impact on quality of life? About 104 cases

# Keywords

Total hip arthroplasty; Disability; Quality of life; Rehabilitation

#### **Authors**

BOUTALJA Hasnaa; MDARBI Sanaa; LMIDMANI Fatima; EL FATIMI Abdellatif

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Department of Physical Medicine and Rehabilitation; University hospital Ibn Rochd Of Casablanca; Morocco

## Introduction

The purpose of this work is to assess the quality of life after rehabilitation of a series of total hip arthroplasty and to compare them to literature

# **Materials & Methods**

A retrospective study involving 104 cases of total hip arthroplasty (including 20 bilateral) performed on 91 patients followed in the physical and rehabilitation medicine department in the postoperative outcome. The evaluation was performed preoperatively, at 6 weeks and 3 months postoperatively, it consisted of an assessment of pain, active and passive joint mobility, function index Postel-Merle of Aubigné (PMA) and quality of life by Western Ontario and McMaster Universities Arthritis Index (WOMAC)

# Results

It is about 56 women and 33 men, mean age 47.23 years(20–75 years). The visual analog scale (VAS) score pain decreased from 67/100 to12/100, six months after surgery. The score for Postel-Merle d'Aubigné varied from 7.2 to 14.8. The WOMAC score for quality of life was significantly improved from 89 to 36. This improvement seems well correlated with decreased pain and improved score of PMA

#### **Discussion**

# Conclusion

Our results confirm the reduction of disability of hip disease after total hip arthroplasty which impacts positively on the quality of life of patients

## References

# Abstract: 273 - Date: 2019-07-01 22:33:10pm

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# **Topic of Summary**

PRM in orthopaedics and musculoskeletal disorders

## **Title of Summary**

Functional results of surgery neurogenicheterotopic ossification in patients with severe traumatic brain injury: About 22 cases

# **Keywords**

Neurogenic heterotopic ossifications; Severe traumatic brain injury; Functional surgery

## **Authors**

BOUTALJA Hasnaa; KYAL Nada; LMIDMANI Fatima; EL FATIMI Abdellatif

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Deparment of Physical Medicine and Rehabilitation; University Hospital of Casablanca; Morocco

## Introduction

The aim of this study is to determine functional outcomes of patients undergoing surgery for heterotopic ossifications

# **Materials & Methods**

This is a retrospective study of 22 patients with severe brain injury followed for neurogenic heterotopic ossifications between April 2018 and May 2019. Patients were evaluated before and after surgery with an epidemiologic profil, a range of movement and a functional assessment

## Results

There were 22 patients with 24 operated joints. The majority of patients were male with 17 men and five women; the average age was 31.5years (19–44 years). The median duration of coma was 84.5 days (19–150 days) Preoperative mobility: for the hip: 31°(0°–65°), to the elbow 28°(0°–80°), the knee 45°(10°–80°). The functional assessment: walking and not sitting in ten patients, not hand-back in nine patients, not hand-neck in eight patients and hand-mouth not in nine patients. All patients received a functional rehabilitation based on continuous passive motion in addition to functional work and surgery excision of heterotopic ossifications. There was a significantly increased mobility after surgical treatment, with a gain of average mobility of 34°at the hip, 51°elbow and 46°at the knee

# **Discussion**

# Conclusion

Neurogenic heterotopic ossifications constitute a disability in addition to various motor deficits, sensory or cognitive patient with severe brain injury. Surgery followed by appropriate rehabilitation has the goal of reducing pain and improving function

## References

# Abstract: 275 - Date: 2019-07-03 15:08:29pm

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# **Topic of Summary**

PRM and oncologic patients

# **Title of Summary**

The assessment of health-related quality of life, fatigue and psychiatric conditions and the effect of being ambulatory, using walking aids or being bedridden: An exploratory cross-sectional study in the end-stage cancer patients

# **Keywords**

Cancer, End-stage, Palliative care, Rehabilitation

## Authors

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#### Introduction

To investigate the differences in the needs of end-stage cancer patients, that can move independently, using walking aids (WAs), or are bedridden; also, to determine the effects of these different physical skills on the patients' current quality of life (QoL), fatigue, and psychiatric conditions.

## **Materials & Methods**

The study is an exploratory prospective cross-sectional study design, which was carried out in two hospitals. The study included 99 cancer patients in the end-stage. Patients functional status of the patients was evaluated in 3 groups: as bedridden, mobile with assistance (using a wheelchair or walking aids), and independent (under the supervision and fully independent). They were conscious for understanding and answering the survey questions. A core-cancer-specific questionnaire-integrating system for assessing the health-related QOL (EORTC-QLQ C15-PAL), Piper Fatigue Scale (PFS) and Hospital Anxiety-Depression scale were assessed.

# Results

The median age was 60 (31-83). Cancer types were as follows: Gastrointestinal cancers(45.5%), lung cancer (38.4%), breast cancer (4%), genitourinary system cancers (4%), and the others (8%). Forty-two percent of the patients were completely bedridden, 42.2% were using WAs, and 15.2% were ambulatory independently. The EORTC QLQ-C15-PAL physical (p=0.000) and emotional function values(p=0.029) differed among mobilization status. There was a significant difference among the mobilization in terms of behavioural values in PFS(p=0.006). Depression rate in the ambulatory group was lower than the bedridden and using WAs(p1=0.011; p2=0.004).

# **Discussion**

## Conclusion

The mobilization affects the QoL, fatigue level and emotional status positively in the endstage cancer patients. These patients should be assessed comprehensively, and the treatment plan should be performed carefully with a multidisciplinary approach.

# References

None

# Abstract: 280 - Date: 2019-07-07 07:16:22am

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# **Topic of Summary**

PRM in orthopaedics and musculoskeletal disorders

# **Title of Summary**

Denosumab is effective among patients with postmenopausal osteoporosis regardless of prior fracture status

## **Keywords**

denosumab; fractures; osteoporosis; osteoporotic fractures

#### **Authors**

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# Introduction

The primary objective of the current study was to evaluate the efficacy of denosumab among patients with postmenopausal osteoporosis. Secondary aim was to assess the influence of previous fracture status and senility on drug efficiency.

# **Materials & Methods**

The study had a retrospective observational design approved by the local ethics committee. Postmenopausal osteoporosis patients who had at least 12-months\' experience of denosumab treatment were included in the study. Data regarding the demographic variables, disease duration, fracture status, baseline and post-treatment T-scores for the lumbar and femoral sites were extracted from the medical records. Any reported adverse events and/or new fractures within the 12-month duration of denosumab treatment were noted. Study outcomes included the delta changes in central T-scores (spine and hip) and the number of subsequent fractures following the initiation of treatment.

### Results

The present study included 123 postmenopausal osteoporosis patients with a mean age of 67.6±9.5 years. Baseline median values for L1-L4 spine and femoral neck T-scores were -3.4 and -2.4, respectively. After 12-month treatment with denosumab, significant improvement was observed in spine and femoral neck T-scores (p<0.001, for both). Regarding the improvement in L1-L4 spine and femoral neck T-score, no statistically significant difference was observed between patients with and without prior fractures (p>0.05 for both). Delta changes of T-scores in senile and non-senile women also showed similarity (p>0.05 for both lumbar and femoral sites).

### Discussion

## Conclusion

Twelve-month denosumab treatment is associated with densitometric improvement in patients with postmenopausal osteoporosis. Drug efficacy is regardless of senility and previous fracture status.

#### References

# Abstract: 283 - Date: 2019-07-07 20:54:34pm

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# **Topic of Summary**

Cardiovascular and pulmonary prevention and rehabilitation

# **Title of Summary**

The impact of the first phase of cardiac rehabilitation in patients undergoing cardiac surgery

# Keywords

Cardiac Rehabilitation, Functional Capacity, Aorto-coronary-bypass surgery, Valve surgery

#### **Authors**

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### **Affiliations**

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# Introduction

The aim of the paper is to show the importance of first phase of cardiac rehabilitation (CR) on functional capacity (FC), the length of stay (LS) in the intensive care unit (ICU) and duration of total hospitalization (DH) in patients undergoing cardiac surgery.

# **Materials & Methods**

The study included 34 (21 man and 13 women) patients, who were prepared for going to aorto-coronary-bypass surgery (CABG) and aortic and mitral valve surgery (VS)) divided into two groups: A (CABG) and B (VS). Rehabilitation consisted of preoperative and postoperative CR.To evaluate FC, we used a two-minute walk test (2MWT) and sit-to-stand test, performed at the last day of hospitalization. LS in the ICU and DH data were taken from medical documentation in both groups. We used EZR statistical software in the statistical analysis.

# Results

All patients completed the scheduled rehabilitation. There were no significant differences in demographic characteristics between groups (sex, age, BMI, or smoking status). Analysis of

mean values between groups of 2MWT (p=0,005), sit-to-stand test, (p=0,022) and for DH (p=0.002) showed significant differences. We didn't find significant difference for mean values of LS in the ICU between groups (2,54  $\pm$  0,90 vs 3,05 $\pm$ 1,07 days). In group A significant correlations occurred between the DH and duration of preoperative rehabilitation (r=0,885 pË,0,0001).

#### **Discussion**

## Conclusion

This study showed that the impact of first phase of CR significantly improves functional capacity abilities after CABG surgery. Also the length of preoperative rehabilitation affects reduction of the hospital stay after CABG surgery.

## References

# Abstract: 284 - Date: 2019-07-09 11:17:41am

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## **Topic of Summary**

Special therapeutic methods in PRM

# **Title of Summary**

The role of Physical Medicine and Rehabilitation Physician in Lymphedema Rehabilitation

# **Keywords**

PMR physician, lymphedema, lymphedema rehabilitation

# **Authors**

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# Introduction

Lymphedema is an incurable, debilitating and progressive condition, leading physical and psychosocial consequences for the patients, if left untreated. Improvements in early diagnosis and treatment of cancers have led a growing number of survivors, and the rates of treatment side effects; including the lymphedema, have increased in the last couple of decades. Lymphedema can also be seen as primary or secondary to other conditions (venous insufficiency, lipedema, trauma, infection) apart from cancer surgeries and/or radiation therapies. Multidisciplinary lymphedema rehabilitation which comprises particularly the complex decongestive therapy, is a gold standart conservative treatment strategy for patients with lymphedema. Lymphedema rehabilitation also consists the primary and secondary preventive strategies as well as self-care principles for the whole life of the patients.

### Materials & Methods

The Physical Medicine and Rehabilitation (PMR) physician is responsible for the differential diagnosis and assessment of the patients in order to set up management and rehabilitation strategies.

## Results

Therefore PMR specialist must have knowledge and education for the diagnosis of disease and complications; assessments, therapy and follow-up of the patients.

## **Discussion**

## Conclusion

In conclusion lymphedema is a chronic progressive condition which requires life-long multidisciplinary treatment and rehabilitation strategies under the supervision and responsibility of PMR specialists. The role of PMR specialists are important in clinical care that their global approach of this problem; by integrating disability, psychological dimensions and quality of life issues, provide the extensive management and rehabilitation of the patients with this chronic and suffering condition.

## References

# Abstract: 290 - Date: 2019-07-10 10:32:24am

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# **Topic of Summary**

PRM in orthopaedics and musculoskeletal disorders

## **Title of Summary**

Carpal tunel syndrome:an occupational disease

# **Keywords**

carpal tunel syndrome, occupation, rehabilitation

## **Authors**

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#### Introduction

Carpal Tunnel Syndrome (CTS) is an important problem among various professions.

#### **Materials & Methods**

The prevalence of CTS among outpatients visited electromyography clinic of National Rehabilitation Center was studied. 450 subjects were examined with EMG based on clinical features for possible CTS, 317 women, age 24-79 years and 123 men, age 27-71 years.

#### Results

The prevalence of CTS was found to be 64% and 56% in women and men, respectively. Among 202 women, CTS subjects were categorized as follows unilateral and bilateral, respectively: working at home (41/62, 66% and 21/62, 33%, respectively, median age 54-79 years), computer professions (134/145, 92% and 11/145, 7%, m.a.:24-77), rural professions (10/12, 80% and 2/12, 1%, m.a.:62-77), cleaners (12/16, 75% and 4/16, 25%, m.a.:31-56) and hairdressers, workers etc (58/67, 8.5% and 9/67, 1.3%, m.a.:26-51). Among 70 men, workers in constructions etc. (41/62, 66% unilateral and 11/32,30%, bilateral, respectively, m.a.:27-63), computer professions (17 unilateral, m.a.:32-48) and pensioners (9, unilateral, m.a.:59-71), builders (9 unilateral, 3 bilateral, m.a.:59-68).

#### Discussion

# Conclusion

Flexed or extended hand position had higher risk for CTS. Higher risk for CTS was found with higher exposure to computer work. Ergonomic considerations are important in facilitating proper positioning of hand while working.

## References

# Abstract: 292 - Date: 2019-07-10 15:28:36pm

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# **Topic of Summary**

Advances in PRM diagnostics

#### Title of Summary

Assessment of the Impact of Loading Pressure in Diabetic Foot (Pilot study of the dorsal Foot pressure)

#### **Keywords**

Foot pressure, Dorsal foot pressure, Diabetic foot

# **Authors**

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## Introduction

Foot ulcers, the major adverse outcome of diabetic foot, were reported on both plantar and dorsal surfaces of diabetic feet, with a relatively higher prevalence of non-plantar ulcers. However, most studies and guidelines have so far focused on plantar pressure measurements and relief for ulcer prevention and treatment with no assessment of the dorsal surface of the foot. This pilot study aimed at investigating the peak walking in-shoe foot pressure on the dorsal surface of the foot in comparison with plantar foot pressure.

### **Materials & Methods**

Simultaneous in-shoe pressure on dorsal and plantar surfaces of right foot were investigated using Pedar Insole measurement system, among 13 healthy volunteers within participants' own comfortable shoes and a provided fitting orthopaedic shoes which is frequently prescribed to patients with diabetes.

#### Results

Though, a significant difference in in-shoe peak pressure was detected on dorsal surface (p<0.001), no significant difference found on plantar surface (p=0.252). Furthermore, removing one of the extra insoles supplied with the orthopaedic shoes revealed some significant reduction in peak pressure on dorsal surface (p=0.046) with a significant increase in plantar pressure (p<0.001) when compared to full insole orthopaedic shoes. Same relation with significant differences observed between participants' own shoes and the orthopaedic shoes minus one insole on both dorsal (p<0.001) and plantar (p=0.003) surfaces.

## **Discussion**

## Conclusion

Although, orthopaedic footwear can significantly reduce dorsal pressure, plantar pressure measurement is an essential prerequisite to adjust insole requirements in-order to reduce plantar pressure. Dorsal pressure measurement and its effect investigation can provide a reliable tool for assessment of diabetic foot.

# References

Abstract: 294 - Date: 2019-07-11 08:00:35am

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# **Topic of Summary**

Community medicine and associative networks in handicap

# **Title of Summary**

Impact of economic crisis on rehabilitation

# **Keywords**

economic crisis, rehabilitation, disability

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# Introduction

In 2010, Greece entered a deep, structural and multi-faceted crisis. We investigated the impact of economic crisis on rehabilitation services for disabled subjects in a National Rehabilitation Center.

# **Materials & Methods**

We studied approximately 600 patients (age>16 years) per year that have been hospitalized over the last 3 years. We recorded problems per patient that cause difficulty in the completion of the rehabilitation and especially problems after their discharge.

#### Results

More than 40% have no health insurance (vs. 10% before 2010) and cannot afford assistive devices, 20% were unable to return home, 15% are unable to participate in outpatient rehabilitation program after their discharge.

# **Discussion**

# Conclusion

High costs, low proximity and long waiting lists are among the main barriers in accessing rehabilitation

# References

# Abstract: 300 - Date: 2019-07-11 15:58:51pm

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# **Topic of Summary**

# **Title of Summary**

MOST FREQUENT DEFORMITIES AND CONDITIONS IN CHILDREN- DIAGNOSTIC AND TREATMENT APPROACHES

# **Keywords**

Deformities; Diagnostics; Treatment; Children

#### Authors

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## Introduction

We aimed to analyze diagnostic dilemmas and treatment approaches of most frequent deformities and conditions in pediatric population.

#### **Materials & Methods**

In this study cases of different most frequent deformities and pathological conditions in pediatric population were presented. In the analysis of treatment results we stressed the importance of protocols, diagnostic methods and treatment modes with regards to type, degree and age of children with deformity and/or post-traumatic complication. Comparative analysis and correlations were done between findings form our and international centers.

## Results

During the infants period patients are mostly referred with congenital anomalies and traumatic lesions. The best results and correction of deformities are possible when referred to early and specific physical treatment. In adolescence the most important is timely recognition of spine deformities for the purpose of optimal maximal correction until the end of the growth, depending on the type and degree of deformity. Managing the complications onset in post-traumatic conditions along with continuous rehabilitation it is possible to achieve best optimal functional recovery. Specific part of pediatric rehabilitation is planning and adaptation of physical treatment along with age, pathology and treatment response.

# **Discussion**

## Conclusion

Timely referral to rehabilitation doctor, age of patients and adequate choice of rehabilitation modalities and modules are significant predictors for best optimal treatment outcome in pediatric population. Multicentric collaboration along with education of up-to –date diagnostic and treatment protocols are significant for optimal decision making strategies in clinical care settings.

# References

# Abstract: 303 - Date: 2019-07-12 21:11:07pm

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## **Topic of Summary**

PRM in orthopaedics and musculoskeletal disorders

# **Title of Summary**

EXTRACORPOREAL SHOCK WAVE LITHOTRIPSY FOLLOWED BY INTRA-LESION INJECTIONS OF SODIUM THIOSULPHATE IN PATIENT WITH UNUSUAL COMBINATION OF LIMITED SYSTEMIC SCLEROSIS WITH DYSTROPHIC SKIN CALCIFICATIONS AND PSORIATIC ARTHRITIS: A CASE REPORT

# **Keywords**

systemic sclerosis, extracorporeal shock wave lithotripsy, sodium thiosulphate

## **Authors**

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# Introduction

Treatment of dystrophic skin calcification (DC) in systemic sclerosis (SSc) patients is difficult. From 2005 to 2018 some case reports of successful treatment with extracorporeal shock wave lithotripsy (ESWL) and intra-lesion injections of sodium thiosulphate were published.\r\n\r\n

#### **Materials & Methods**

We report the case of a 63 years female patient with rare combination of limited SSc, DC, psoriatic arthritis, and hyperuricemia.

### Results

Patient had Rodnan skin scor 7/51. On both knees had fistulas from where the small stones calcification and white, cream-like material spontaneously went out. She had normal serum phosphorous, calcium and vitamin D level. Rheumatoid factor was negative. Anti-centromere antibody was positive. She had late nailfold videocapillaroscopy pattern. X-ray showed diffuse subcutaneous calcification on knees, left elbow and fingertips. DXA showed osteopenia (T-score of total hip was -1.6, and spine -0.2). Therapy with methotrexate (15 mg/weekly), calcium channel blocker (20mg once a day), febuxostat (80 mg once a day), vitamin D, pain relief medication, and surgical skin incision with drainage was unhelpful. ESWL (6 sessions at weekly intervals in both knee regions, then a 6 weeks pause interval and again 6 ESWL sessions at weekly intervals), followed intra-lesional injections of sodium thiosulphate(150 mg/ml, once and a week for 4 weeks) showed positive results. We found healing of the ulcers, functional improvement, and partial radiographic regression of calcinosis. Visual analog scale pain scores (range 0-10) decreased from 10 to 2.

# **Discussion**

## Conclusion

ESWL followed by injections of sodium thiosulphate presents potentially useful combination of agents in treatment of DC in SSc patients.\r\n\r\n

#### References

# Abstract: 305 - Date: 2019-07-13 16:58:37pm

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## **Topic of Summary**

Orthotics and prosthesis in PRM

# **Title of Summary**

Impact of instrumental assessment on prescription of a first prosthesis for a complex vascular amputee

# Keywords

Prostheses; Amputee; Gait Analysis; Weight-Bearing

#### **Authors**

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# Introduction

To show the utility of a gait laboratory evaluation for optimization of prosthesis prescription in patients with poor vascularization of the contralateral limb.

# **Materials & Methods**

We report a case-study of a 35 years old male, with a history of type 1 diabetes (19 years evolution and poor control), hypertension, smoker, ischaemic heart disease, diabetic gastroparesis and previous right foot osteomyelitis. Presented 8 months after left transtibial amputation (K1 on amputee scale), faint right dorsalis pedis pulse and external right foot hyperkeratosis, complicated with local abscess. Who was admitted to our center for a prosthetic rehabilitation programme. Before prescription of the prosthesis, the patient was evaluated in the gait laboratory wearing a transtibial endoskeletal prosthesis with a patellar tendon bearing rigid socket and two different types of feet: carbon and dynamic SACH - baropodometry, kinematics, kinetics and video, for each prosthetic foot.

# Results

The carbon foot showed a better weight bearing symmetry = right 348,58N; left 312,83N (dynamic SAHC foot = right 379,19N; left 282,24N), while still inputting a heavier load to the right lower limb. Mean velocity was also better with carbon foot (1,16m/s vs 0.95m/s).

### **Discussion**

#### Conclusion

The prosthesis prescribed had a carbon foot. We also prescribed a full-contact insole for the right foot, according to the rationale that symmetry and lower load on the spared limb might minimize the risk of ischemia and help prevent or delay ulcers or even a future contralateral amputation. At discharge, the patient was independent in all activities, including gait and tolerated the prosthesis for more than 12h/day.

#### References

# Abstract: 307 - Date: 2019-07-13 17:39:27pm

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## **Topic of Summary**

Rehabilitation services in Mediterranean countries and Africa

# **Title of Summary**

Quality of care in outpatient Physical Medicine and Rehabilitation Department: A population-based study

# **Kevwords**

quality of care, satisfaction, Physical Medicine and Rehabilitation

#### **Authors**

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### Introduction

Objective \r\nProfessional practices evaluation aims to improve continuously the quality and safety of patient care. In this context, the aim of the current study was to evaluate quality of care in an outpatient Physical Medicine and Rehabilitation (PMR) Department.\r\n

# **Materials & Methods**

A self-administered questionnaire was created and given to patients consulting in the outpatient PMR Department. The questionnaire included multiple-choice questions and free-response questions covering the following items: accessibility, responsiveness, effectiveness,

and satisfaction. The survey was conducted over a six-month period (January-June 2019). \r\n\r\n

## Results

A total of 346 patients filled out the questionnaire. Their median age was 48 years [37.7-58]. Although the majority found the questionnaire easy to use, a few needed help to fill it out. The majority of patients (71.4%) were satisfied or very satisfied from the care provided. Overall satisfaction was mainly associated with satisfaction upon the effort provided by the healthcare team (OR= 6.9; p<0.001), with clinical improvement judged by the patient himself (OR=4.39; p<0.001), with good reception by physiatrists (OR=4.22; p=0.024) and with a short waiting time before undergoing rehabilitation session (OR=4.44; p=0.013)\r\n\r\n

## **Discussion**

## Conclusion

The self-administered questionnaire seems to be appropriate for assessing quality of care. Answers obtained helped to know where the health care system was functioning correctly, and to identify the weakness points needing to be improved.\r\n\r\n

#### References

this work was conducted in accordance with current ethical standards and regulations in biomedical research\r\n

# Abstract: 310 - Date: 2019-07-14 14:36:20pm

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# **Topic of Summary**

Neurorehabilitation, spasticity

# **Title of Summary**

DIGITAL AND BERG BALANCE EVALUATION

# Keywords

BALANCE EVALUATION, BERG TEST

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# Introduction

## TO DEMONSTRATE THE RELIABILITY OF BERG BALANCE TEST

## **Materials & Methods**

A COMPARATIVE STUDY FOR 25 SUBJECTS OF BOTH GENDERS, BETWEEN DIGITAL AND BERG BALANCE TESTS, AND ANALYSIS OF THEIR OUTCOME DATA

#### Results

1) GLOBAL STUDY REVEALED THAT 55%OF THE POPULATION HAVE MEDIUM OR HIGH DIFFERENCE PERCENTAGE \r\n\r\n2) IN GENDERS COMPARISON THE MEDIUM AND HIGH DIFFERENCE PERCENTAGE IN FEMALES IS HIGHER (35 %) MORE THAN MALES (MAY BE DUE TO DIFFERENT CENTER OF GRAVITY LOCATION AND NATURAL MUSCLES WEAKNESS)\r\n

## Discussion

#### Conclusion

1) FEMALE SUBJECTS IN BERG TEST ARE MORE SUSCEPTIBLE TO HAVE INACCURATE RESULTS IN COMPARISON WITH MALE SUBJECTS \r\n2) DIGITAL BODY BALANCE EVALUATION IS MORE RELIABLE AND REPRODUCTIVE THAN BERG TEST\r\n

## References

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# Abstract: 313 - Date: 2019-07-14 17:50:04pm

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# **Topic of Summary**

Rehabilitation services in Mediterranean countries and Africa

## **Title of Summary**

A prospective study of morbidity care in rehabilitation unit in Sousse, Tunisia

# Keywords

rehabilitation unit; morbidity; care associated infections

### **Authors**

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1Physical and rehabilitation department, Hospital University Sahloul, Sousse Tunisia; 2 Physical and rehabilitation department CHU Fattouma Bourguiba Monastir

## Introduction

To describe morbidity in a rehabilitation unit and identify its associated factors.

#### **Materials & Methods**

A descriptive prospective study, in a period of 12 months, from January to December 2015, including patients hospitalized in our rehabilitation unit in Sahloul Hospital. Patients who died within 24 hours after admission are excluded.

## Results

231 patients were included in this study; mean aged 44 years old [7-87]. SEX ratio was: 1, 35. The most frequent reasons for admission were traumatic pathologies in 31% and rheumatic diseases in 26% of cases. Most common complication was the care associated infections in 60 patients (26%). Urinary tract infection was the most frequent site in 71,6% of cases than infection of surgical site in 6,6%. Studying factors that could influence the occurance of such complications we noticed significant differences in patients with co morbidity (diabetes, hypertension), patients with bedsore; and those who had urinary or blood catheterize and long period of hospitalization. After a logistic regression we only find that those complications are associated to a period a long period of hospitalization OR 27,43%.

## Discussion

# Conclusion

Rehabilitations units are not excluded from morbidity, this can be explicated by clinical features of our patients (operative wound, urinary catheterization...) Studying those factors is necessary, to identify and prevent those complications.\r\n\r\n\r\n

# References

rehabilitation; statistics

# Abstract: 315 - Date: 2019-07-14 22:21:23pm

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# **Topic of Summary**

Pain management in PRM

# **Title of Summary**

localized Neuropathic pain after total knee arthroplasty

# **Keywords**

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#### Introduction

Persistent postsurgical pain is a frequent and disabling complication. With multifactorial etiology, it frequently presents a neuropathic component related to intraoperative nerve injuries or alterations in the modulation of pain by central sensitization. Prevalence 10-50%. After knee arthroplasties, 20% of patients present pain, in the absence of infection, mechanical disorders or complex regional syndrome. In both anteromedial and medial approaches used in total or unicompartimental knee replacements respectively, infrapatelar branches of the saphenous nerve can be affected causing localized neuropathic pain(LNP) in the anterior aspect of the knee and proximal tibia. Identifying the LNP requires a meticulous and detailed medical history. The questionnaires DN4 and Diagnostic Tool, facilitate their diagnosis. The initial therapeutic use of topical agents, such as capsaicin 8%, is recommended for its effectiveness, safety and tolerability in multi-pathological and geriatric patients.\r\n

## **Materials & Methods**

An 83-year-old male referred to the Rehabilitation Service after two-compartment left knee prosthetic surgery 3 months ago. Walk with walker. Scar attached, with allodynia and anteromedial face hyperalgesia. Muscular balance 4/5. Extension-20°, flexion 80°. EVA 8/10. DN4 7/10. Diagnostic Tool 4/4. Normal knee radiographs and clinical analysis. Treatment was started with 8% capsaicin patches, achieving pain control and allowing the performance of the ambulatory rehabilitation treatment.

## Results

5 months later:EVA 0, articulation range 0-100°, autonomous ambulation.

# Discussion

# Conclusion

In pain after knee joint replacement, it is necessary to diagnose and treat the nociceptive and neuropathic component in order to achieve adequate functional recovery. Preference should be given to local measures in polymedicated or senile patients with LNP. The capsaicin patch is a good therapeutic option.

# References

Abstract: 317 - Date: 2019-07-14 22:58:37pm

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# **Topic of Summary**

Orthotics and prosthesis in PRM

## **Title of Summary**

Amputation, Rotationplasty and Prosthetic management in children: a case report

## **Keywords**

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# Introduction

The usual treatment of Ewing\'s Sarcoma was the demolition surgery. After the appearance of adjuvant chemotherapy, the survival of these patients increases, and with it, the number of school age children affected with high growth potential. Hence, reconstructive surgeries are proposed instead of conventional amputations due to greater limb preservation and better functionality.

## **Materials & Methods**

We describe the case of Ewing\'s sarcoma in a 9-year-old boy with a history of retinoblastoma.\r\nThe tumor involved the entire length of the left femur. He also had a pulmonary metastasis. Given the incomplete response to neoadjuvant chemotherapy, we chose amputation, rotationplasty and fitting of the left lower limb and thoracoscopy to treat the lung injury.\r\nA bypass prosthesis was placed for the first 6 weeks, until there was healing, bone consolidation and absence of complications, followed by a definitive prosthesis for the next 4 months.\r\nAfter 1 year the patient was capable of independent walking with the use of the prosthesis, swimming with a fin adapted to the stump and was restarting activity on a bicycle.\r\n

# Results

In the last clinical review, with 13 years, he is free of disease and continues periodic checks in our office for opportune adaptations of prosthesis according to his growth.

# **Discussion**

# Conclusion

This case highlights the various reconstructive options and the difficulties encountered in the management of these aggressive malignant processes.\r\nRotationplasty surgery is a viable therapeutic option in young patients with Ewing\'s Sarcoma, which allows the child to participate again in premorbid daily and recreational activities.\r\n

## References

# Abstract: 320 - Date: 2019-07-15 01:49:18am

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# **Topic of Summary**

Neurorehabilitation, spasticity

# **Title of Summary**

MOTOR DYSFUNCTION IN A CLINICAL SAMPLE OF AUTISTIC CHILDREN: A CROSS-SECTIONAL STUDY

# **Keywords**

Motor dysfunction; Autism

## **Authors**

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# Introduction

Motor deficits are frequently reported by physicians and parents as being the main problems of concern. Although not included in the diagnostic criteria, vocal atypicalities are common in children with autism spectrum disorder (ASD) and these difficulties appear to be closely correlated with motor dysfunction. \r\nWe aim to evaluate the motor impairment in a sample of autistic patients and its association with various domains of autism symptoms . \r\n

### **Materials & Methods**

The study was conducted on 33 typical autistic children, whose age ranged from 7-9 years, with intelligence quotient > 60 and adequate receptive language. Two control groups were recruited: control 1 comprised 15 patients with mental retardation, control 2 comprised 6 healthy matched subjects. Stanford Binet – 5th edition: The Arabic version for assessment of intelligence was used. Childhood Autism Rating Scale (CARS) was used as a global rating of autism. Language was assessed using the Arabic Language Test (Kotby 1995). All the 54 participants were subjected to detailed neurological examination, hand prehension and praxis assessment

### Results

According to CARS, most of our patients (72.2%) were classified into mild to moderate autism. Peculiarities of speech, distal motor weakness, dyspraxia, positive cerebellar signs and impaired prehension were significantly higher in autistic patients (P<0.05). Patients with distal weakness, positive cerebellar signs and impaired prehension showed significantly worse CARs scores and worse language development than those without (P<0.05).

# Discussion

## Conclusion

Motor dysfunction in autism is pronounced and is significantly associated with language peculiarities. Physical rehabilitation should be minded early

## References

# Abstract: 321 - Date: 2019-07-15 02:01:44am

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# **Topic of Summary**

PRM in paediatric problems

## **Title of Summary**

Passive Range-of-Motion Exercise and Bone Mineralization in Preterm Infants: A Randomized Controlled Trial

## **Keywords**

â-º metabolic bone disease â-º physical activity â-º bone mineral density â-º preterm infant

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# Introduction

To assess the effect of range-of-motion exercise program on bone mineralization and somatic growth of very low birth weight (VLBW) infants.\r\n

## **Materials & Methods**

Study Design A total of 36 VLBW infants were randomized into 18 VLBW infants\r\nreceiving range-of-motion exercise and 18 VLBW control infants receiving tactile\r\nstimulation for 4 weeks. Laboratory investigations were performed at baseline and postexercise and included serum calcium, serum phosphorus (s.PO4), magnesium, alkaline phosphatase (ALP), urinary calcium/phosphate ratio, and serum carboxyterminal\r\ncross-linked telopeptide of type 1 collagen (CTX). Dual-energy X-ray absorptiometry was performed at the end of the exercise protocol to measure bone mineral content, bone mineral density (BMD), bone area, lean mass, and fat mass.\r\n

#### Results

The weight and the rate of weight gain were significantly higher (p < 0.001)\r\nin the exercise group compared with controls postexercise. Also, higher s.PO4, lower ALP, and lower urinary calcium/phosphate ratio were observed postexercise in the exercise group (p  $\frac{1}{4}$  0.001, p  $\frac{1}{4}$  0.005, and p  $\frac{1}{4}$  0.04, respectively) whereas, serum CTX showed no difference between the two groups (p  $\frac{1}{4}$  0.254). Postexercise BMD significantly improved in the exercise group (p < 0.001) compared with controls.\r\n

#### **Discussion**

## Conclusion

Although the sample size was small, we may be able to suggest favorable\r\neffects of range-of-motion exercise versus tactile stimulation on bone metabolism, BMD, and short-term growth in VLBW infants.\r\n\r\n

## References

# Abstract: 322 - Date: 2019-07-15 06:35:48am

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# **Topic of Summary**

PRM in orthopaedics and musculoskeletal disorders

# **Title of Summary**

Rehabilitation outcomes after lengthening of femur with external fixation over intramedullary nail

## **Keywords**

# **Authors**

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#### Introduction

Highlight the rehabilitation outcomes of femoral lengthening using and external fixator over an intrameduallary nail

# **Materials & Methods**

Ten patients (16 femur) with a mean age of 20 years (range 15-25 y) undergone femoral lengthening with an external fixator on an intramedullary nail. After a lengthening of 0.75mm / day nail was blocked distally and the external fixator was removed when the desired length was reached. Progression of bone lengthening and consolidation were evaluated clinically and radiographically to calculate the External Fixator index and the Healing index. Also, problems, obstacles and complications associated with the procedure, according to the Paley classification were registered.

## Results

Association between age (p = 0.007), treated pathology (p <0.001) and Healing index were observed; the latter was not found to be influenced by the sex of the patient (p = 0.676). There were recorded 4 problems (infections), 3 obstacles in 3 cases and a complication in one case only.\r\nThe comparison of achondroplastic patients treated with two different methods highlighted the importance of the intramedullary nail as allows a reduction of the External Fixator and Healing index (p <0.001). Rapid return to full Knee movement was observed at six months after frame's removal (p <0.001).\r\n

#### Discussion

## Conclusion

external circular fixator over an intramedullary nail is a safe and reliable method and offers important advantages in terms of timing, comfort and functional recovery compared to the standard method. Also, allows intensive rehabilitation in a short time avoiding joint stiffness, permitting fast functional recovery without complications on the regenerated.

## References

# Abstract: 326 - Date: 2019-07-15 08:40:58am

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# **Topic of Summary**

PRM in orthopaedics and musculoskeletal disorders

# **Title of Summary**

Physiotherapy as non-pharmacological treatment in patient with ankylosing spondylitis in the Institute "Dr Simo Milosevic" Igalo- Montenegro

# Keywords

ankylosing spondylitis, physical therapy, Institute Igalo

#### **Authors**

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## Introduction

To investigate the effect of physiotherapy as non-pharmacological therapy in patients with AS depending on whether its pharmacological treatment involves biological therapy or not.

## **Materials & Methods**

Total of 74 patients who fullfield ACR criteria for AS were on 4 week rehabilitation and physical treatment in Instutute Igalo. Depending on their pharmacological treatment they were grouped into two groups: (I) treated with biological therapy (BT group, n=34) and (II) with no biological therapy (non-BT group, n=40). \r\nApplied physical therapy have entailed a combination of active (mobilising and strengthening exersise in gym and swimming pool, breathing exercises and brisk walking) and passive (peloid application,jacuzzi,massagemanual and underwater and electrotherapy) procedures. The participans were evaluated clinically before and after rehabilitation period (week 0 and 4). The treatment response were measured by occiput-wall distance (OWD), Schober test (ST) and respiratory index (RI). \r\n

## Results

Analyzed groups did not differ according to mean values of applied physical therapy. However patients of BT group have significantly frequent active therapy (p<0.001) while those from non-BT group have significantly frequent passive therapy (p<0.001). After 4 week of physical treatment there were significant improvement in the analyzed groups by average values of OWD (BT group p<0,03, non BT group p<0,04), ST (BT group p<0,001, non-BT group p<0,01) and RI (BT group p<0,001, non-BT p<0,01).

## **Discussion**

## Conclusion

Active physical therapy modalities are dominant in rehabilitation patient with AS and combined with applied biological therapy significantly improved respiratory index and spine mobility in general.

# References

# Abstract: 333 - Date: 2019-07-15 14:55:09pm

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# **Topic of Summary**

PRM in paediatric problems

# **Title of Summary**

Childhood disability in Morocco

# Keywords

Childhood, disability, Morocco, prevalence

## **Authors**

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## Introduction

This research aims to describe the epidemiological profile of the child\'s disability in Morocco

# **Materials & Methods**

A descriptive cross-sectional multicenter study was conducted from March 2015 to May 2018. 559 children with different causes of disability were included in our study.

## Results

The average age of our population is of average age of 9 +/- 4.98. The male sex is predominant in 60%.\r\nThe causes of childhood disability are dominated by cerebral palsy (33.1%), followed by trisomy (15.2%), mental retardation (14.3%) and autism (13.8%).\r\nThe most common types of disability are motor impairment (49.2%), intellectual disability (30.6%), cognitive impairment (15.2%), sensory impairment (4.3%) and lastly polyhandicap (0.7%).

### **Discussion**

# Conclusion

it is urgent to develop the rehabilitation services specialized in the pediatric rehabilitation in the different networks and levels of care of the Moroccan health system with the creation of poles of excellence by type of disability and disease the most currents.

### References

# Abstract: 336 - Date: 2019-07-15 18:27:00pm

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### **Topic of Summary**

Cardiovascular and pulmonary prevention and rehabilitation

# **Title of Summary**

Does age influences stroke severity and functional evolution in acute phase?

# **Keywords**

age, stroke severity, functional evolution, acute phase

## **Authors**

Carolina Lourenço; Adriana Pascoal; José Vilaça; João Diogo Silva; Inês Ferro; Pedro Sá; Rosário Santos Silva; Filipe Morais; Abílio Gonçalves; Amélia Pereira

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Centro de Medicina de Reabilitação da Região Centro – Rovisco Pais; Hospital Distrital da Figueira da Foz

### Introduction

The population is getting older, consequentially the patients with cerebrovascular pathology are rising.\r\nThe aim of this paper was to understand if there is a correlation between patient age, stroke severity and functional evolution in acute phase.

#### **Materials & Methods**

Observational prospective study which included the stroke patients admitted in an acute care hospital in May to July 2018. The data was collected through the patient's informatic file, direct evaluation or caregiver's interview. The variables analyzed included age (categorized in the following groups: < 75, 75-84 and >85 years old), functional status (classified with motor Function Independence Measure [FIM] and Barthel scales applied previously to the admission, during hospitalization and at discharge) and severity of stroke (classified according to the former scales in mild, moderate and severe). Statistic treatment of data was processed by IBM SPSS version 22.0.

#### Results

In the referred period, 34 patients were admitted with stroke. Their mean age was  $75.9 \pm 10.3$  years. Severe stroke patients had more advanced age than mild stroke patients ( $82 \pm 7.6$  vs.  $70 \pm 11.3$  years old) (p=0.006). Older patients (>85) had the greatest functional loss after stroke in Barthel scale ( $62.5 \pm 40$  to  $21.2 \pm 20.1$ ) (p=0.043). At discharge, no statistically significative differences were observed in functional evolution between age groups.

## **Discussion**

# Conclusion

According to our results, age may influence stroke severity and functionality loss in acute phase, however it does not have an impact in functional evolution in the acute phase.

# References

Abstract: 338 - Date: 2019-07-15 19:17:05pm

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# **Topic of Summary**

Community medicine and associative networks in handicap

## **Title of Summary**

Neuromuscular diseases, Tunisian specificity

# **Keywords**

neuromuscular diseases, disability, PRM

#### **Authors**

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#### Affiliations

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#### Introduction

Myopathies are clinically and genetically heterogeneous diseases, they still have a high prevalence in Tunisia by the persistence of the high frequency of consanguineous marriages. But the treatment is still insufficient.

## **Materials & Methods**

The\"Tunisian myopathy", discovered by Pr Mongi Ben Hamida, is a gamma sarcoglycanopathy LGMD2C located on chromosome 1, affects both girls and boys, with an early onset, a clinical picture as DMD in children with normal intellect, a disorder of the articulated dental, cardiac involvement less frequent and less severe than with MD.Medical management in recent decades has benefited from early corticotherapy protocols, functional rehabilitation and respiratory rehabilitation programs as well as various devices.

# Results

In the Department of PRM a monthly pluridisciplinary consultations over 10 years, the essential problem remains in a late consultation at PRM (16,7years), half non-walking, all had neuro-orthopedic disorders including equine ankle in 70% of cases. Many reasons were identified: the lack of multidisciplinary comprehensive care centers, the remoteness of rehabilitation centers, the lack of mobile rehabilitation device/ rehabilitation networks.

### **Discussion**

# Conclusion

Early management including fitting, physiotherapy, occupational therapy, as well as therapeutic education of the patient and his family (postures) can prevent their onset, slow their evolution and preserve the quality of life in neuromuscular diseases.

# References

Abstract: 339 - Date: 2019-07-15 19:22:41pm

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# **Topic of Summary**

Pain management in PRM

## **Title of Summary**

Pain and disability in posttraumatic hand rehabilitation

# Keywords

pain, disability, occupational therapy, rehabilitation

#### Authors

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## Introduction

Occupational therapy (OT) in the context of the rehabilitation team must take into account the pain level to improve the physical disability.

### **Materials & Methods**

A prospective, two-year observational study was performed on a group of 230 patients who experienced various peripheral nerve injuries in the upper limb. Patients were admitted to National Institute for Rehabilitation, Bucharest, between 2014 and 2016. Patients were evaluated at four times: at the time of initiation of the unit, two weeks, three months, six months.\r\nThroughout the four evaluations, the global muscular strength was measured using the Jamar and the Pinch dynamometer for different type of prehension.\r\nThe VAS scale was used to evaluate the pain, and for sensitivity the patients were evaluated with Semmes Weinstein monofilaments. Functionality was evaluated using the Quick Dash questionnaire.\r\n

# Results

The study found that participation in OT helped to increase muscle strength within the prehension, and to reduce pain in all four evaluated moments. At the same time, an improvement in sensitivity score was observed both in the touch and pressure sensitivity.

# Discussion

# Conclusion

In a statistically significant percentage, with the reduction of pain and the intensification of the OT program, there were improvements in the daily activities. As barriers to the application of OT program, we encountered heavy reducible retractions of flexor tendons, significant stiffness in metacarpophalangeal and proximal interphalangeal joints under the timing of the rehabilitation program due to difficult scarring and residual edema or the presence of 15% of neuropathic pain (carpal tunnel syndrome or cubital neuritis).

# Abstract: 342 - Date: 2019-07-15 20:16:37pm

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# **Topic of Summary**

Neurorehabilitation, spasticity

# **Title of Summary**

The experience of a Tunisian department of rehabilitation in management of spasticity by Botulinum toxin and neuromotor block

# **Keywords**

spasticity-Botulinum toxin

#### **Authors**

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### Introduction

Present the experience of a Tunisian department of Physical Medicine and Rehabilitation in the management of spasticity by Botulinum Toxin (BT) and neuromotor block.

# **Materials & Methods**

Descriptive and retrospective study conducted in a Tunisian department of Physical Medicine \r\nbetween May 2018 and May 2019, including patients who received BT injection or neuromotor block. For each patient: diagnosis, assessment of spasticity with Ashworth modified scale, site of injection and results after the injection (30 minutes for neuromotor block and 4 weeks for BT).\r\n

#### Results

We included 54 adults with sex ratio 0.9, middle age 35.2 years and 68 children with sex ratio 2.8, middle age 7.16 years. For adults: etiology was cerebral palsy in 26%. Tetraparesia in 40.7%. Score of spasticity 2.27 Neuromotor block was conducted in 63% with functional and neuro orthopedic improvement in 44.1%. BT was conducted in 38.8% with neuro orthopedic and functional improvement in 90.4% of cases. \r\nFor children: etiology was cerebral palsy in 65%. Tetraparesia in 67.6%. Score of spasticity 2.1. BT injection was conducted in the past in 44.1% of cases. Neuromotor block in 7.3% and botulic toxin in 97% followed by plaster in 13.6% and with neuro orthopedic and functional improvement in 50%. \r\n\r\n

#### Discussion

## Conclusion

The management of spasticity is a great part of the activity in our department. Neuromotor block are generally conducted in adults to verify whether toxin may be effective or not. In chldren, multiple injections of toxin were conducted in early ages to prevent neuroorthopedic disorders and avoid or postpone surgery.

#### References

# Abstract: 343 - Date: 2019-07-15 20:17:13pm

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# **Topic of Summary**

Community medicine and associative networks in handicap

# **Title of Summary**

(MENASCI) Middle East & North Africa Spinal Cord Injury Network

#### Keywords

MENASCI, Spinal Cord Injury (SCI), Network,

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Multi Rehab Centres and Universities in the MENA region

## Introduction

To Establish SCI Network to promote cross regional exchange, learning, education, technical capacity development support and research in the field of SCI management.

# **Materials & Methods**

Meeting between colleagues personally, by whatssApp and through emails discussed the possibility of establishing an SCI network in the region.

#### Results

The following countries have expressed an interest Jordan, Iraq, Egypt, Syria, KSA, Kwait, UAE & Morocco in becoming part of this Network which was launched during the last PAN ARAB PM&R congress which was held in AMMAN October 2017, then the first (MENASCI) meeting and workshops was held in March 2018 parallel to the 8th Annual Conference on Rehabilitation and\r\nDisability of Fez attended by 27 high level national and international scientific speakers and involvment of people with SCI in both organising moderating and

lecturing, more than 250 delegates attended from different regions of Morocco in addition to other countries including Jordan, Sudan, Kuwait, United Arab Emirates and Mali.

#### Discussion

#### Conclusion

We are confident that MENASCI will contribute to creating a space for\r\ncooperation and joint action with all actors in Region for a better life for all\r\npeople with SCI. President's Cabinet and executive committees have been\r\nelected, people with SCI were involved in a consumers committee, next steps\r\nfor MENASCI will be the 2nd MENASCI Meeting and workshops in the UAE in\r\nFebruary 2020. Within this timeframe we will also work towards formal ISCoS\r\naffiliation of MENASCI.

## References

# Abstract: 344 - Date: 2019-07-15 20:29:05pm

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## **Topic of Summary**

Neurorehabilitation, spasticity

# **Title of Summary**

What are the benefits of hydrokinesitherapy in Parkinson's disease?

# **Keywords**

"hydrokinesitherapy", "PD" "land-based exercise"

# **Authors**

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# Introduction

Introduction: The Parkinson's disease(PD) is a neurodegenerative disease that leads to progressive loss of neurons in the substantia nigra, resulting in several dysfunctions with motor and non-motor symptons.\r\nObjective: What are the effects of aquatic exercise on disease severity and quality of life(QL) in people with PD? Does aquatic exercise have greater effects than other forms?\r\n

## **Materials & Methods**

Pubmed search with the terms \"hydrokinesitherapy", "PD\" and \"land-based exercise" published between 2012-2017. We included 15 articles.

#### Results

1trial assessed the effect of aquatic exercise compared with control and found a significant improvement in the Unified Parkinson\'s Disease Rating(Scale PartIII) in favour of aquatic exercise. 6studies compared aquatic exercise with land-based exercise after intervention and the effect of aquatic exercise was superior to land-based exercise on the Berg Balance Scale (MD2.7, 95% CI1.6 to3.9), the Falls Efficacy Scale (MD –4.0, 95%CI –6.1to –1.8) and the 39-item Parkinson\'s Disease Questionnaire (MD –6.0, 95%CI–11.3to –0.6). One study demonstrated the decreased the basal plasma levels of inflammatory markers (MCP-1,IL-1ra and IL-1 $\beta$ ) in PD which were submitted to a supervisioned aquatic therapy program during 1month, twice a week(60min/session). In one study participants were randomly assigned to aquatic therapy or obstacle aquatic therapy. Both groups had improved primary outcomes after the training program. Obstacle aquatic therapy was significantly higher for the Freezing of Gait Questionnaire.

#### Discussion

## Conclusion

Aquatic exercise improves impairments in people with PD significantly more than no intervention. It also has slightly to moderately greater benefits than land-based exercise on balance capacity, fear of falling, and QL.

#### References

# Abstract: 345 - Date: 2019-07-15 20:59:38pm

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# **Topic of Summary**

Cardiovascular and pulmonary prevention and rehabilitation

# **Title of Summary**

IS IT POSSIBLE TO REMOVE COMPRESSION GARMENTS IN UPPER LIMB LYMPHEDEMA (ULL) SECONDARY TO BREAST CANCER TREATMENTS?

# Keywords

Lymphedema, breast cancer

#### **Authors**

Belén Alonso Álvarez \* Blanca Palomino Aguado \* David Pozo Crespo \* Daniel Torres Noriega

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Sª de Medicina Física y Rehabilitación. Hospital Universitario Ramón y Cajal, Madrid (España)

#### Introduction

To assess the evolution / safety of removing compression garments in patients with ULL after breast cancer.

### **Materials & Methods**

Retrospective observational study. Patients with post-mastectomy ULL, stable (content <2.5 cm, no complications last year), treated in our Unit, to whom we removed partially (maintained for activities that require effort) or fully the compression garments.\r\n\r\n\We analyzed symptoms / consistency of lymphoedema / complications of 30 patients at diagnosis / remove of garments / end of follow-up at 25 months. \r\nLymphedema classification: mild (2-3cm) / moderate (3-5cm) / severe (> 5cm) by circometry. We consider good evolution: stable edema (progression \(\text{i,£} 15 \) mm), content (<2.5cm), soft, without infections / symptomatic worsening after remove. Biostatistics Unit performed Stata analysis 15.1.\r\n

#### Results

We completed data on 28 patients. Lymphedema was mild in 23 cases and moderate in 5. Consistency of edema was soft in 23 patients. Initial average age was 62.3 years (40-84). Average time of evolution of lymphedema before removing the garment: 63 months. Garment removal was full in 12 cases and partial in 16. After 25 months, the edema progressed in 4 patients (14.3%), but remained moderate and soft. No complications appeared in any case. 14 patients could stop wearing the garment, 13 could use it only part time and 1 needed it full time

#### Discussion

## Conclusion

In 85.7% of cases, lymphedema remained stable, soft and uncomplicated after removing the compression garment. \r\nResearch studies are needed to determine what types of lymphedema (and in what moment of their evolution) could benefit from the removal of compression garments.\r\n

## References

# Abstract: 346 - Date: 2019-07-15 21:55:48pm

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## **Topic of Summary**

Special body function problems e.g. spasticity, urinary system, sexuality, dysphagia, speech disorders and others

### **Title of Summary**

Rehabilitation of Peripheral Facial Paralysis - a Review

# Keywords

Bell's palsy; Rehabilitation; physical therapy; electro-stimulation

#### **Authors**

Mariana Castro Martins; Ana Almeida Pereira; Denise Seixas de Marruaz

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#### Introduction

Peripheral facial palsy is the most prevalent peripheral lesion of the cranial nerves. The most common cause is idiopathic (Bell's Palsy), responsible for 70% of cases, however it is always a diagnosis of exclusion.\r\nThe facial nerve is responsible for the control of muscular facial expression, so its paralysis is not only an aesthetic issue, but implies functional consequences like eating, drinking, speaking difficulties, as well as difficulties in expressing feelings.\r\nPhysical therapy is an important tool in approaching the patient with facial palsy, which can extend from initial education of the normal facial musculature and movements associated, until neuromuscular reeducation and synkinesis management.\r\nThis review aims to gather the most relevant information from the last 20 years at the current time regarding facial palsy\s rehabilitation.\r\n

#### **Materials & Methods**

Relevant articles published on MEDLINE - Pubmed database; Cochrane Database of Systematic Reviews and the Cochrane Central Register of Controlled Trials from 1990 until May 2019 were included.

#### Results

The measures of the rehabilitation program under consideration in the authors' review include techniques of kinesiotherapy, neuromuscular reeducation, thermotherapy, massage, electrotherapy, laser therapy and application of botulinum toxin. \r\nThe scientific evidence of the psychical therapy management of bell's palsy is heterogeneous and still limited. \r\n

#### **Discussion**

## Conclusion

Although these therapeutic measures have been widely used over the years as an attempt to normalize facial musculature functionality, accelerate recovery and decrease the likehood of sequelae, clinical indications are quite contradictory and further trials are needed to assess the clear effects of each therapeutic model.\r\n

## References

# Abstract: 347 - Date: 2019-07-15 22:35:02pm

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## **Topic of Summary**

Pain management in PRM

## **Title of Summary**

Radial extracorporeal shockwave therapy in pain of chronic rotator cuff tendinopathy

## **Keywords**

radial extracorporeal shockwave therapy, pain, tendinopathy, physical and rehabilitation medicine

#### **Authors**

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 2 - Centro Hospitalar do Funchal - Physical and Rehabilitation Medicine
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#### Introduction

Several studies have demonstrated the effects of extracorporeal shockwave therapy (ESWT) in musculoskeletal injuries. The benefits achieved seem largely associated to focused ESWT modality. This study aims to assess the efficacy of radial pulse therapy (rESWT) particularly in pain relief of patients suffering from chronic rotator cuff tendinopathy.

#### **Materials & Methods**

Observational prospective study of a cohort of patients with chronic rotator cuff tendinopathy, who exclusively underwent 5 sessions of rESWT. The treatment was composed of 2000 pulses per session, once a week, 1,6 to 3,6bar of energy (as high as tolerated) and 15Hz frequency. Pain was assessed by the Numeric Rating Scale (NRS); pain pharmacotherapy necessity was quantified before and after rESWT; satisfaction with the treatment was reviewed.

#### Results

From a total of 13 patients included in the study, 12 (92,3%) referred lower pain intensity after rESWT. The mean NRS for pain after treatment showed a significant reduction from  $6,85 \pm 1,1$  to  $3,62 \pm 2,2$  (p<0,001). Furthermore, 69,2% of the patients no longer needed analgesics in a daily basis switching to a PRN scheme or none at all. For the question: "Are you satisfied and better after treatment?", 92,3% of the patients answered positively. No side effects were documented.

## Discussion

### Conclusion

Although most studies show focused ESWT benefits in shoulder tendinopathy, rESWT are emerging as an effective conservative treatment. Our study demonstrated that rESWT is safe and effective for both reduction of pain and number of pain medication needed.

# Abstract: 349 - Date: 2019-07-15 22:51:53pm

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## **Topic of Summary**

Special body function problems e.g. spasticity, urinary system, sexuality, dysphagia, speech disorders and others

## **Title of Summary**

Urinary disfunction in traumatic brain injury - a retrospective study

## **Keywords**

traumatic brain injury, urodynamics, neurogenic bladder

#### **Authors**

Margarida Costa Pereira; Filipa Vilabril; Jorge Rocha Melo; Marta Torres; Gustavo Beça

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#### Introduction

Lower urinary tract symptoms (LUTS) are common in traumatic brain injury (TBI) patients. Possible causes are primary traumatic lesions and midbrain dysfunction. Cognitive impairment may also play a role. Overactive bladder is the most frequent urinary disturbance described after TBI. The aim of this study is to investigate and characterize urinary dysfunction in TBI patients, using urodynamic findings.

## **Materials & Methods**

We conducted a retrospective study, collecting data from 42 patients with TBI (34 males) admitted to our rehabilitation unit during a 4 year period, who underwent urodynamic testing. Exclusion criteria were presence of another neurological lesion or disease, history of LUTS and urologic surgery previous to the lesion. Information about the urinary symptoms, severity of the lesion, value of Functional Independence Measure (FIM) and neuropsychological dysfunction was collected. Mann-Whitney Test was used.

### Results

All but 3 patients had severe TBI. Mean age was 39.8 years. Urinary symptoms were present in 50% (n=21) of patients and 28.6% (n=12) had history of urinary tract infection. Detrusor hyperactivity was detected in 57% (n=24) of patients. Sphincter dyssynergia was present in 35.7% (n=15). There was a positive correlation between the value of FIM and presence of sphincter dyssynergia (p=0.007).

#### Discussion

#### Conclusion

Urinary dysfunction in TBI patients should not go unnoticed, as it has an impact on these patient's quality of life and may lead to serious complications. Moreover, we found a significant prevalence of sphincter dyssynergia, not frequently described in this population, which warrants further investigation.

#### References

# Abstract: 351 - Date: 2019-07-15 23:01:18pm

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## **Topic of Summary**

Special body function problems e.g. spasticity, urinary system, sexuality, dysphagia, speech disorders and others

#### **Title of Summary**

Management of Bell\'s palsy under the umbrella of recommandations

#### **Keywords**

Bell's palsy; investigation; treatment, rehabilitation; synkinesis

## Authors

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#### Introduction

Bell\'s palsy accounts for 80% of facial palsies. Facial paralysis is traumatic because it affects the expressiveness of the face, the very identity of the patient. To say that it is necessarily a facial paralysis has frigorous without preliminary explorations (brain MRI studying all the facial nerve) is a double error

#### **Materials & Methods**

Medication and rehabilitation management is based on recommendations based on metaanalyzes and andomized studies.

#### Results

Preliminary assessment of a patient with Bell palsy should include physical examination, to rule out other causes of facial weakness, and a grading of severity of weakness, to determine further treatment.

## **Discussion**

#### Conclusion

for a better functional recovery, follow the correct protocol in functional rehabilitation by avoiding forcing and electrostimulation. Functional rehabilitation is essential in speech therapy or physiotherapy

#### References

the Canadian Society of Otolaryngology - Head and Neck Surgery and the Canadian Neurological Sciences Federation for their support in developing this guideline. The Algerian Society of Head and Neck Surgeons;

# Abstract: 352 - Date: 2019-07-15 23:12:39pm

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## **Topic of Summary**

Pain management in PRM

## **Title of Summary**

Acupuncture versus Homeopathy as a Complementary Therapy in Patients with Knee Osteoarthritis

## Keywords

Homeopathy Acupuncture Osteoarthritis

#### **Authors**

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#### Introduction

To assess the efficacy of Acupuncture compared to Homeopathy and usual conservative treatment (analgesics and physiotherapy) in patients with knee osteoarthritis.

## **Materials & Methods**

75 patients with painful knee osteoarthritis [ACR] criteria and Kellgren-Lawrence score of 2) were included. Participants were randomly divided into three groups. Group I (Acupuncture group): 25 patients receiving acupuncture twice weekly for 6 weeks. Group II (Homeopathy group): 25 patients receiving oral doses of homeopathic remedies for osteoarthritis (Arnica Montana, Ruta graveolans and Rhus toxicodendron). Group III (Control group): 25 patients who continued only on their pre-study medications and physiotherapy. Pain intensity on visual analog scale (VAS), the Health Assessment Questionnaire (HAQ) score and the Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC) score were recorded for each patient before the beginning of treatment, and at the end of the sessions.

#### Results

Group I showed :significant pain improvement; significant improvement in knee function on the total WOMAC score; significant decrease in knee swelling and significant increase in patient quality of life assessed by the HAQ score in comparison to other groups (p<0.05). Group II showed significant improvement in the total WOMAC score, significant reduction in the number of tender points, significant decrease in the number of patients receiving analgesics in comparison to the control group (group III) (p<0.05).

#### Discussion

#### Conclusion

Both Acupuncture and Homeopathy are effective in reducing pain and improving function, yet, acupuncture is apparently superior and more effective than homeopathy in treating knee osteoarthritis.

#### References

## Abstract: 354 - Date: 2019-07-16 00:38:29am

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## **Topic of Summary**

PRM Education research and management in the mediterranean countries

## **Title of Summary**

Personality Profile in Relation to Food Addiction Among a Sample of Egyptian Females

## **Keywords**

food addiction, obesity,

## **Authors**

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## Introduction

Negative emotions are one of the most important triggers of self-regulation failure. Some people when get upset they comfort themselves with food, alcohol, or drugs. We aimed to

study the associations of food addiction with personality traits, investigating, the hypothesis of managing obesity as an addictive disorder .

#### Materials & Methods

Our case-control study included 200 females ( 100 obese and 100 non obese controls) with age range of 18 to 40 years.\r\nThey were furtherly divided into 2 groups; food addict 108 females and nonfood addict 92 females according to Yale food addiction scale score, \r\nThose having any neuropsychiatric disorders were excluded. Patients were assessed using: General Health Questionnaire, Temperament and Character Inventory, Barratt impulsiveness scale, Negative Affect Repair Questionnaire.\r\n

#### Results

Food addicts used significantly more calming distracting strategies to control their negative emotions than nonfood addicts (P=0.0001). Although nonfood addicts used more cognitive and behavioral strategies (P<0.001), food addicts were significantly more impulsive (P=0.0001) and more novelty seekers, more harm avoidant, less self-directed and less cooperative, than the nonfood addict (P=0.021, P=0.009, P=0.001, P=0.012), respectively. Comparison between Obese and Non Obese only showed significance as regards Negative affect regulation questionnaire (NARQ) parameters where obese rated lower scores

#### Discussion

#### Conclusion

Food addiction is not necessarily associated with obesity, as food addicts could be non obese. \r\nNegative mood regulation and impulsivity have important effect on food addiction in obese and non obese females. \r\nPsychiatric assessment in management of overweight and obese subjects is mandatory. \r\n

# Abstract: 34 - Date: 2019-05-14 15:21:14pm

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#### **Topic of Summary**

PRM in paediatric problems

## **Title of Summary**

FEEDING PROBLEMS, GROWTH AND NUTRITIONAL STATUS IN CHILDREN WITH SEVERE NEUROLOGIC IMPAIRMENT AND INTELLECTUAL DISABILITY

### **Keywords**

feeding; growth; nutrition; cerebral palsy

#### **Authors**

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service de médecine physique CHU Fattouma Bourguiba Monastir Tunisie

## Introduction

Feeding difficulties, common among children with cerebral palsy (CP), are currently lacking in children with severe neurologic impairment and intellectual disability. The aim was to estimate the prevalence of feeding and nutritional problems in children with severe cerebral palsy (CP) in Tunisia.

#### **Materials & Methods**

This was a cross-sectional study of 40 children with severe CP. The inclusion criteria were the following: age 2–19 y, proven or estimated IQ<55 y, and with Gross Motor Function Classification System (GMFCS) GMFCS levels 4 or 5. Anthropometric measurements (body weight, knee height, mid-upper arm circumference, and triceps skin-fold thickness) were taken. In addition, all the participants had a thorough evaluation of the feeding times, and the presence of gastrointestinal problems (drooling of saliva, vomiting, dysphagia, etc...).

## Results

Oromotor dysfunction affected 70% of children, drooling of saliva were noted in 30 of cases and gastroesophageal reflux in 14 of cases. The meal was given in most cases by the mother and lasted on average 40 minutes. No children with gastrostomy tube feeding. The average skinfold value was  $6.5 \pm 3.5$  mm and the mid-arm circumference was  $16.1 \pm 3.4$  cm. The weight was on average 15Kg.

#### Discussion

## Conclusion

Feeding problems in children with CP were common and associated with poor linear growth. A high proportion of the children were undernourished. Moreover, our results suggest that gastrostomy tube feeding may have been introduced too late in some children.

#### References

# Abstract: 35 - Date: 2019-05-16 13:29:00pm

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#### **Topic of Summary**

Cardiovascular and pulmonary prevention and rehabilitation

#### **Title of Summary**

Early Rehabilitation Of Patients Having Undergone Associated Heart And Carotid Artery Surgeries

#### Keywords

Cardiac surgery, endovascular procedures, early rehabilitation

#### **Authors**

Borjana Lukic; Miodrag Peric

#### **Affiliations**

Surgery; Rehabilitation

#### Introduction

Associated open heart and carotid artery surgeries are high-risk surgeries. A hybrid procedure of carotid artery dilatation with a subsequent same-day heart surgery can reduce surgical risk in this high-risk group of patients. The aim is to determine whether there is a difference in the speed of patients' recovery between patients after surgeries performed in one act – group A, and a group with endovascular interventions in carotid artery followed by a same-day open heart surgery – group B.

### **Materials & Methods**

A retrospective analysis was performed at the Dedinje Cardiovascular Institute in the period from January 2018 to January 2019 there were 45 patients who had a combined carotid artery and open heart procedure. The post-operative rehabilitation was done based on general principles of rehabilitation through the dosing of loading and fatigue and continuous heart checks (blood pressure and heart rate).

#### Results

The group A had 32 patients with an average age of 67 years, and the mean Euroscore II value was 4,24. The early mortality rate was 6.25%, and a significant morbidity occurred within 5 patients (15.6%). The recovery time in this group was 6-21 days (10,27). The group B had 13 patients with the average age of 64.7 years, and the mean Euroscore II value was 4,61. The early mortality rate was 0%, and a significant morbidity occurred in 2 patients (15.3%). The recovery time in this group was 7-28 days (12,23).

#### Discussion

## Conclusion

#### References

## Abstract: 37 - Date: 2019-05-20 09:01:34am

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## **Topic of Summary**

PRM in orthopaedics and musculoskeletal disorders

## **Title of Summary**

Knee Osteoarthritis: Evidences for Regenerative injections, A brief literature review

#### **Keywords**

Knee osteoarthritis, Prolotherapy, PRP, Stem Cells, Mesenchymal Stem Cells, Aminiotic fluid, Bone marrow derived MSC, Adipose derived MSC, Exosomes, Growth Factors

## **Authors**

Manoj Kuamr Nair

#### Affiliations

**Dubai Health Authority** 

#### Introduction

To find high quality evidences from clinical studies including RCTs, systematic reviews for regenerative injections available for Osteoarthritis of the knee

## **Materials & Methods**

Literature review for the last 10 years for Clinical Studies, RCTs, Systematic reviews.

## Results

Results will be mentioned in Table format

#### Discussion

#### Conclusion

The field of regenerative medicine is rapidly evolving. Current treatments focused mainly on injecting prolotherapy, PRP, adipose, bone marrow derived stem cells and amniotc fluid preparations in to the joint space. Latest studies indicate the role of exosomes in stem cell treatment. More rigorous high quality studies are needed in this field.

## Abstract: 38 - Date: 2019-05-21 12:07:25pm

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## **Topic of Summary**

PRM in orthopaedics and musculoskeletal disorders

#### **Title of Summary**

Electromyographic analysis of the scapular upward rotator muscles during 3 scapular rehabilitation exercises

## Keywords

upper trapezius; serratus anterior; lower trapezius; scapular upward rotation; scaption; protraction

#### **Authors**

Jun-hee Kim; Oh-yun Kwon; Ui-jae Hwang; Sung-hoon Jung; Sun-hee Ahn; Hyun-a Kim; Gyeong-tae Gwak

## **Affiliations**

1, Yeonsedae-gil, Maeji-ri, Heungeop-myeon, Wonju-si, Gangwon-do, 26493, Department of Physical Therapy, College of Health Science, Laboratory of Kinetic Ergocise Based on Movement Analysis, Yonsei University, Wonju, South Korea

#### Introduction

The purpose of this study was to compare the muscle activity of upper trapezius (UT), serratus anterior (SA), and lower trapezius (LT) muscles during two representative exercises used to strengthen SA muscles and newly designed scapular upward rotation (SUR) exercise.

## **Materials & Methods**

29 healthy adult men participated in the experiment. All subjects performed scaption, protraction and SUR exercises with maximum isometric contraction. The SUR exercise was performed in the upward rotation direction of the scapula with fixed at 45 degrees from the ground in the sitting position. During the exercise, muscle activities of UT, SA, LT were recorded.

#### Results

The UT activity during scaption was significantly higher than UT activity during the protraction and SUR exercise. The UT activity during SUR exercise was significantly higher than protraction exercise. The SA muscle activity when performing the scaption was significantly higher than the muscle activity when the protraction was performed. Also, the SA muscle activity during the SUR was significantly higher than the muscle activity during the protraction. LT activity during scaption was significantly higher than LT activity during the protraction and SUR exercise. Also, LT activity during SUR exercise was significantly higher than protraction exercise.

#### Discussion

#### Conclusion

SUR exercise showed significantly lower UT muscle activity compared to scaption exercise, but there was no significant difference in SA muscle activity. In addition, the SUR showed significantly higher SA muscle activity than the protraction. SUR may be used as one of the effective ways to strengthen SA muscles while preventing excessive UT muscle activity.

#### References

Thanks to Won Young-soo, a researcher who helped collect data.

## Abstract: 44 - Date: 2019-06-08 18:24:50pm

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## **Topic of Summary**

PRM in paediatric problems

## **Title of Summary**

ROLE OF PHYSICAL ACTIVITY IN THE TREATMENT OF ASTHMA SEVERITY IN OVERHALED ASTHMATIC CHILDREN ABOUT 95 CASES ASTHMATIC CHILDREN OVERLOAD IN THE REGION OF SIDI BEL ABBES

## Keywords

severe asthma, obesity, physical activity, severity of asthma, child, obesity, overweight, weight loss, physical activity, GPAQ, GINA

## **Authors**

Messafeur A.1; Belkessam N. 2; Soulimane A1.

#### **Affiliations**

1 Département de Médecine, Sidi Bel Abbes, Algérie; 2 Département de Pharmacie, Sidi Bel Abbes, Algérie

#### Introduction

Our study documents the impact of physical activity on the severity of asthma in obese or overweight children and adolescents attending school aged 8 to 19 in the wilaya of Sidi Bel Abbes.

## **Materials & Methods**

We have conducted a pre- and post-mortem assessment survey of 95 overweight children with asthma. Two questionnaires: Global Physical Activity Questionnaire (GPAQ) and Global Initiative for Asthma (GINA) were used for the collection of anthropometric data and those for asthma and physical activity (PA). The assessment of the severity stage of asthma was made according to the national consensus of pneumology (2013). Children and adolescents in our

study performed AP for eight months in order to appreciate the change in Body Mass Index (BMI) on the one hand and especially to assess the severity of asthma on the other hand.

#### Results

The results of the Global Physical Activity Questionnaire (GPAQ) revealed a low level of physical activity in two-thirds of children. The results showed that the rate of overweight was significantly higher in children with low AP (p = 0.003). Following our intervention, an average peak exhalation rate (PEF) improvement of  $(18.30 \pm 9.4)\%$  was observed and a significant correlation (p = 0.05) was noted between the percentage of the weight loss and improvement of the DEP.

#### Discussion

#### Conclusion

All of these data show that weight loss significantly improves the severity of asthma and that the integration of moderate to intense physical activity should be systematic in the therapeutic strategy of overweight or obese asthmatic children and adolescents.

## Abstract: 55 - Date: 2019-06-23 10:39:51am

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## **Topic of Summary**

Advances in PRM diagnostics

#### **Title of Summary**

Reasoning in electrodiagnosis

### **Keywords**

Electrodiagnosis; Reasoning

#### **Authors**

El-Abd Mohamed

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#### Introduction

Identification of pertinent clinical data.\r\nidentification of electrodiagnostic reporting patterns.\r\nAnalysis of reasoning components in electrodiagnostic reports

#### Materials & Methods

Descriptive survey of pertinent clinical data; accuracy of the recorded and interpretation of electrophysiological data; reasoning components included in electrodiagnostic reports of 3200 studied patients in my Clinic during years 2002-2018.

#### Results

Pertinent clinical were synoptic in 83%;incomplete in 29% and adequate in 32%. Technical precision of recorded data was fulfilled in 77%. Over-and under-interpretation; terminology errors; anatomic error were the prevailing inadequacies. Identification and comprehension components of reasoning were commonly of stereotyped patterns. The synthesis component was generally inadequate to serve the Logical internal accuracy and consistency of the synthesized ideas conducting to scientifically rational diagnosis. the clinical problem under testing. \r\n\r\n\

## Discussion

## Conclusion

Reasoning in electodiagnosis plays a role in narrowing the gap between conclusion derived from the obtained electrophysiological data and the medical truth about the nature of the clinical problem under consideration.

## References

/

## Abstract: 61 - Date: 2019-06-24 08:45:15am

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## **Topic of Summary**

Neurorehabilitation, spasticity

#### **Title of Summary**

EARLY REHABILITATION AFTER SURGICAL REPAIR OF ACUTE ANEURYSMAL SUBARACHNOID HEMORRHAGE

## **Keywords**

subarachnoid bleeding, vasospasm, rehabilitation.

#### **Authors**

Andjela Milovanovic; Natasa Mujovic; Slavica Rajevic; Tatjana Medic; Tatjana Radovanovic; Ivan Selakovic; Sanja Tomanovic Vujadionovic

### **Affiliations**

Medical school University Belgrade; Clinical Center of Serbia, Clinic for physical medicine and rehabilitation

#### Introduction

\r\nThe protocol of early rehabilitation for these patients does not exist in the world, and this is why this research originated. To examine the connection between early rehabilitation and verticalization with vasospasm, ischemia, neurological findings and functional, as well as their recovery. As well as the most important to establish the protocol of early rehabilitation.

## **Materials & Methods**

A randomized study was conducted at the Clinical Center for Neurosurgery of the Clinical Center of Serbia, from 2013 to 2015 Approved by the Ethics Committee of the Medical Faculty in Belgrade. 65 patients undergoing acute treatment were divided into group I (N = 34) who started early rehabilitation with verticalization starting 2-5 days from bleeding, group II (N = 31) who started early rehabilitation early on but were verticalized around the 12th days of bleeding. We followed: vasospasm, ischemia, neurological condition of the patient, functionality by functional independence assessment scale (FIM) on release, month and three after surgery.

## Results

Group I had a significantly higher percentage of patients with ischemia than group II on release. Group I had a greater number of patients with group II hemiparesis after three months. Functionality is better in Group II than Group I.

#### Discussion

#### Conclusion

Early rehabilitation and verticalization has an effect on vasospasm, ischemia, neurological findings and functional, as well as their recovery. Verticalization of these patients should not be performed before the 12th day of bleeding

#### References

## Abstract: 65 - Date: 2019-06-24 10:51:30am

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## **Topic of Summary**

Sports injury rehabilitation

## **Title of Summary**

Improvement of the shoulder kinematic and ergonomics for the preservation of upper limb function in wheelchair athletes.

#### **Keywords**

wheelchair athletes; kinematic analysis; sEMG; prevention; sport injury

#### **Authors**

Andrea Demeco; Nicola Marotta; Gerardo de Scorpio; Angelo Indino; Annalisa Petraroli; Lucrezia Moggio; Roberto Bianchito; Teresa Iona; Antonio Ammendolia

#### Affiliations

University Magna Grecia of Catanzaro

## Introduction

The aim of this observational study is to verify if the guidelines for the preservation of upper limb function of the Consortium for Spinal Cord Medicine may be applicate to prevent sport injuries.

#### **Materials & Methods**

A group of 10 wheelchair basketball athletes not affected by acute tendinopathy of the shoulder who played at least from 5 years have been enrolled. We educated a healthcare provider to follow daily the athletes in the application of guidelines. The athletes underwent to a self-administered Kerlan–Jobe Orthopaedic Clinic (KJOC) Shoulder and Elbow questionnaire and a kinematic analysis coupled with surface electromyography before the beginning of the sport season (T0) and after the end (T1) in order to evaluate the efficacy of the propulsive stroke and the range of motion of the shoulder.

## Results

KJOCSE score was higher at T1 than T0 with a mean increase of the 0,9 points in each item. The wheelchair propulsion techniques improved in pattern and acceleration at T1. The movement of the scapulothoracic joint during abduction of the upper limb, the abduction and external rotation of the glenohumeral joint were significantly higher (p<.05) at T1 than T0.

## **Discussion**

## Conclusion

The improvement of the shoulder kinematic and change of the ergonomics are related to the preservation of the upper limb function and the perception of a better physical capability. This study confirmed that the guidelines reduce the incidence of pain and cumulative trauma disorders of the upper limbs not only in people with spinal cord injury but even in wheelchair athletes.

# Abstract: 69 - Date: 2019-06-25 12:32:17pm

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## **Topic of Summary**

Orthotics and prosthesis in PRM

#### Title of Summary

Incidence of Achilles tendinopathy and / or plantar fasciitis in the surviving limb in above knee amputees

#### **Keywords**

Achilles Tendinopathy, Plantar Fasciitis, Lower limb amputee

#### **Authors**

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#### Affiliations

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## Introduction

To study the incidence of Achilles Tendinopathy and Plantar Fasciitis in the surviving limb in lower limb amputated patient.

## **Materials & Methods**

Randomly selected patients meeting the inclusion criteria . ACT and PF were screened clinically using MSK ultrasound machine.\r\nAll patients were examined by the same clinician \r\nAll patients were scanned by the same Radiologists \r\nThe study was carried out at the SACM centre, Wythenshawe , UK\r\nSelection criteria: Established TFA , a minimum of 1 year. Full unrestricted use of the prostheses . Unaided walking . No predisposing injuries of previous trauma, fractures, tendon ruptures. No comorbidities : DM, heart diseases, alcoholism, neuromuscular disorders, poorly controlled COPD or asthma, inflammatory arthritis . No recent use of oral ABx namely Fluoroguinolones.\r\n

#### Results

1 patient: Symptomatic PF and ACT \r\n1 patient: pain PF, asymptomatic ACT \r\n1 patient: Painful ACT , Asymptomatic PF \r\n13 patients: completely asymptomatic \r\n.\r\nPlantar fascia :Thickness range found: 2.7-5.5mm . 5 patient : < 3.5.3 patients: 3.5-4 mm borderline. 5 patients : > 4mm thickened \r\n.\r\nAchilles tendon: Thickness range found: 4.5-7.8mm . < 5.5 mm normal: 8 patient . 5.5-6mm Borderline: 2 patients . > 6.1 mm thickened: 3 patients.

## Discussion

#### Conclusion

ACT and PF pain is theoretically high in amputees\r\nHigher thickness of ACT and PF in asymptomatic can be considered normal for them \r\nFactors to be considered in this

study:\r\nVariation in prosthesis \r\nSmall size of the cohort\r\nAbsences of female participants \r\nVariation in length and level of use of prosthesis \r\nVariation in patient's weight

#### References

# Abstract: 71 - Date: 2019-06-25 19:48:33pm

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## **Topic of Summary**

Orthotics and prosthesis in PRM

## **Title of Summary**

Challenges of the rehabilitation program in a multiple limb amputation patient- Case report

#### **Keywords**

multiple limb amputation, amputation rehabilitation, prosthesis

## **Authors**

Chrysanthi Ntasiopoulou, PRM Doctor; Sokratis Sgoutzakos, PRM Doctor; Athanasios Permekerlis, General Surgeon; Dionysia Delaporta, Neurologist; Eirini Mouza, PRM Doctor, Medical Director.

#### Affiliations

\"Anagennisi\" Rehabilitation Center, Thessaloniki, Greece

## Introduction

Quadrilateral amputations are very rare. They are reported in blast injuries in troops. We are exploring the special considerations regarding the rehabilitation of a 17 year old unaccompanied refugee admitted to the rehabilitation center after undergoing amputation surgeries due to frostbites and gangrene. The patient suffered trans-tibial amputation of both legs and partial amputation of both hands.

#### **Materials & Methods**

A case study about the multifocal treatment and the supporting network that was established with therapists, translators, prosthetists and rehabilitation doctors in close collaboration with a non-governmental organization. Apart from the rehabilitation goals (muscle strengthening, improvement of ROM of joints, treatment of the inflammation of the surgical wounds and formation of the stumps, psychological support, cognitive improvement, nutritional support, independent gait training) the development of an alliance with the patient and the family via update and regular communication and establishment of short and long-term goals was basic. Special considerations and challenges were faced not only due to mixed upper and lower limb loss but also due to the lack of a nearby family environment, the presence of social and cultural differences and legal and financial issues.

## Results

The patient improved considerably in every aspect. The improvement of the function of the hands allowed donning and doffing of the prosthesis independently. The patient is now training in independent gait without support.

## Discussion

## Conclusion

A complex supporting network is essential to achieve any goal in such cases. A lot must be done additionally in psychological support, integration, community interactions, language learning and job training.

## Abstract: 72 - Date: 2019-06-26 08:48:15am

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## **Topic of Summary**

PRM in geriatric conditions

#### **Title of Summary**

Intradialytic exercise programs - a review

### **Keywords**

"hemodialysis"; "rehabilitation"; "intradialytic exercise".

#### **Authors**

Gonçalo Engenheiro; Inês Táboas; Catarina Aguiar Branco.

#### **Affiliations**

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#### Introduction

The purposes of this review on exercise in hemodialysis patients are to identify: 1) the benefits and harms, 2) the motivations and barriers and 3) the most suitable intradialytic exercise programs.

## **Materials & Methods**

Pubmed database performed with key terms "hemodialysis", "rehabilitation" and "intradialytic exercise" identified 8 relevant articles published until December 2018. We only considered articles regarding intradialytic exercise interventions.

#### Results

Exercising at least once a week improves quality of life, mental and physical functioning and sleep quality and decreases bodily pain and lack of appetite. Concerns over safety and type of exercise and impact on staff workload are specifically barriers identified for intradialytic exercise. Age is no formal barrier and elderly patients may even respond better to exercise programs. The majority of exercise interventions consists of two to three weekly sessions during hemodialysis treatments and are mainly aerobic exercise lasting from 30 to 90 minutes per session with intensities ranging from 60 to 80% of maximal oxygen consumption. Low intensity endurance training with cycle ergometer is also beneficial. Resistance muscular training can be prescribed alone or in combination with aerobic exercise, both demonstrating improvements in physical function. Exercise should be performed in the first 2 hours of dialysis sessions because of fatigue and hypotension risk. Concerns regarding vascular access complications while exercising may be addressed by privileging leg exercises during dialysis, leaving arm training to be performed prior to the treatment.

## **Discussion**

## Conclusion

Intradialytic exercise programs have proven to be beneficial even in elderly patients and therefore should be widespread.

## Abstract: 73 - Date: 2019-06-26 10:17:58am

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## **Topic of Summary**

PRM in paediatric problems

## **Title of Summary**

Results of TIMP, AIMS and Griffiths scales in a sample of preterm children

#### **Kevwords**

preterm; development; scales; TIMP; AIMS; Griffiths

#### **Authors**

Margarida Freitas; Susana Almeida; Graça Santos; Teresa Tiago; Sandra Gonçalves; Cristina Duarte

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#### Introduction

The Test of Infant Motor Performance (TIMP) is a functional motor scale for newborns and infants under 4 months old. TIMP can discriminate among infants with varying degrees of risk for poor motor outcome. Gross motor development of preterm infants can also be assessed by the Alberta Infant Motor Scale (AIMS). Griffiths-III is a measure for assessing the rate of development in infants up to 5 years. The purpose of this study is to assess the relationship between the scores achieved in TIMP, AIMS and Griffiths scales.

#### **Materials & Methods**

Our sample had a total of 208 preterm children who underwent the TIMP and AIMS tests between 2010 and 2016. A total of 116 children were assessed by the Griffiths test. After the TIMP scale was applied, children were classified in 4 degrees of risk - low, moderate, high and very high risk of poor motor outcome.

#### Results

We found a relationship between the TIMP results and the Griffiths scale (performed around the age of 5 years). Children with normal development had statistically significant better TIMP results. Children with developmental delays had previously obtained worse TIMP values. We verified that the AIMS scale also shows a positive correlation with the TIMP scale. Children considered to be at high risk according to TIMP, had lower AIMS values at 3 months of age.

## **Discussion**

#### Conclusion

There is an association between these scales. TIMP seems to be predictive for motor and psychological development. It should be applied in order to start therapy and improve prognosis.

## Abstract: 80 - Date: 2019-06-26 11:53:26am

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#### **Topic of Summary**

PRM in geriatric conditions

#### **Title of Summary**

PAIN AND NUTRITION IN PHYSIOTHERAPY

#### **Keywords**

Physiotherapy, pain, D vitamine, nutritional status

#### Authors

Lourdes González Peña, Mª Auxiliadora López Llanos, Nerea de la Puente Sánchez, Gema Flores Sánchez, Paloma Galán Novella.

#### **Affiliations**

Rehabilitation department. Virgen de la Poveda Hospital. Madrid. Spain.

#### Introduction

To assess the influence of a physiotherapy session on pain intensity and its relationship with nutritional status and D vitamin levels.

#### **Materials & Methods**

An observational, cross-sectional study was done for 84 patients treated in one day in the physiotherapy area. All patients were admitted to a Functional Recovery Unit. \r\nThe pain level was analyzed prior, at the end and three hours after the sesión of the physiotherapeutic treatment. To measure the pain, we used an Visual Analogic Scale (VAS) Numeric Verbal Scale (NVA) and PAINAD scale according to the patient\'s comorbility (visual impairment, motor coordination, dementia ...)\r\nNutritional status and D Vitamin levels were determined by blood test. \r\nEpidemiological and clinical data of the patient were registered.\r\nThe statistical analysis was carried out using the SPSS program v.21.\r\n

## Results

The pain level was 3.1 + 3.5 before treatment and 2.90 + 3.4 at the end. Three hours after treatment, the pain value was 2.1 + 2.7, significantly lower than the initial one (p <0.05). \r\nIn those patients with D vitamin deficiency, the pain level was higher than in those with normal levels, without differences by sex or diagnosis.\r\nIn malnourished patients, the pain value was lower than in patients without criteria of malnutrition p<0.01.\r\nThe improvement in pain was greater in amputees than in neurological and trauma patients.\r\n

#### **Discussion**

## Conclusion

Physiotherapy treatment decrease the pain level specially three hours after treatment.\r\nDeficient levels of D vitamin are associated with higher pain level.\r\nPatients with malnutrition have less pain.\r\n

## References

The authors wish to thank the Virgen de la Poveda Hospital management for allowing us to carry out the study and to staff and patients for their cooperation.

# Abstract: 82 - Date: 2019-06-26 15:09:30pm

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## **Topic of Summary**

Special body function problems e.g. spasticity, urinary system, sexuality, dysphagia, speech disorders and others

#### **Title of Summary**

Clinical and urodynamic evaluations of urinary disorders in Idiopathic Parkinson\'s Disease

### **Keywords**

Parkinson's disease – Urodynamics - lower urinary tract symptoms

#### **Authors**

Saoussen Layouni1; Sahbi Elmtawa1; Emna Toulgui1; Moncer Rihab1; Walid Ouannes1; Faycal Khachnaoui1; Sonia Jemni1; Anis Hassine2; Manel Ben Halima 2; Salma Naija 2; Rabiaa Douma 2:Sana Ben Amor 2

### **Affiliations**

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## Introduction

Patients with Parkinson's disease often have lower urinary tract symptoms(LUTS). They are associated with severely disturb the quality of life. The aim is to describe the clinical and urodynamic profile of bladder dysfunction in idiopathic Parkinson's disease.

#### **Materials & Methods**

A descriptive study was performed at the unit of urodynamic analysis in the Department of Physical Medicine and Rehabilitation for ten months from June 2017 to March 2018, including 40 patients with idiopathic parkinson's disease. The motor symptoms were assessed using Unifed Parkinson disease Scale (UPDRS III). The overall severity was assessed according to the Hoehn and Yahr stage. Their urinary tract dysfunctions were rated using the Urinary Symptom Profile (USP). The urodynamic study was done in all patients.

#### Results

The mean patient age was 61.8+/-11.18 years. The average of UPDRSIII was 36.6+/-20.46. Median Hoehn and Yahr scale was 2. Clinical evaluation of LUTS revealed the predominance of irritative symptoms with an average overactive Bladder score of 9.6+/-4.75. Urodynamic evaluation revealed that the dominant bladder dysfunction was detrusor hyperreflexia in 65% of patients. Bladder hypersensitivity is found in 75% of cases. Bladder capacity is decreased in 55% of patients. Flowmetry showed a significant decrease Urinary flow rate in 50% of patients. Urethral pressure profile was normal in 70% of patients. USP scale had significant correlations with urodynamic abnormalities with P<0.05.

#### Discussion

## Conclusion

The frequency and impact of LUTS in Parkinson's disease requiered adequate exploration and care to improve patient quality of life. Urodynamic investigations are necessary to choose the best treatment.

# Abstract: 91 - Date: 2019-06-27 15:42:28pm

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## **Topic of Summary**

Rehabilitation services in Mediterranean countries and Africa

## **Title of Summary**

\"Refer for Rehab\": a local audit on referrals for inpatient rehabilitation services in Malta

### **Keywords**

Rehabilitation Medicine; Referrals; Malta; Audit

#### **Authors**

Andrei Agius Anastasi; Stephen Zammit

#### Affiliations

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#### Introduction

Rehabilitation Medicine specialists face significant challenges when dealing with the assessment and selection of patients for inpatient rehabilitation services. Despite the great impact that this process has on healthcare resources and inter-specialist relations, evidence in this field is scarce (New PW. TOREHJ 2009; 2: 24-34). To this end, we present an audit on the details and outcomes related to patients referred for inpatient rehabilitation in Malta.

#### **Materials & Methods**

All referrals received from the months of April-August, 2018, requesting transfer for inpatient rehabilitation services in Karin Grech Hospital (KGH) were analysed. Details related to outcomes were obtained from electronic hospital records and analysed further using SPSS.

## Results

A total of 116 patients were analysed. The majority of patients were referred from Orthopaedics (42.2%) followed by Neurosurgery (18.1%). 41.4% were accepted for transfer to KGH, with an average age of 59.1 years and an average waiting time of 4.8 days. The commonest reason for refusal was an excessively high level of independence at the time of consultation (12.9%). 81% of patients transferred to KGH were eventually discharged home with an average length of stay of 37 days (median 18 days); 7.1% needed transfer to the acute medical hospital while 11.9% were still at KGH, with an average stay of 200 days.

### **Discussion**

### Conclusion

More research is needed to identify best practices in assessment and patient selection for inpatient rehabilitation. Updating of guidelines and delivering inter-speciality education on the role of inpatient rehabilitation are currently being done locally to tackle the issue.

# Abstract: 93 - Date: 2019-06-27 16:11:27pm

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## **Topic of Summary**

Neurorehabilitation, spasticity

#### **Title of Summary**

Implementation of 6-week Bioness program for upper limb dysfunction— a pilot study

## Keywords

functional electrical stimulation; hand; pilot study

#### **Authors**

Lauren Tanti; Anabel Cortis; Andrei Agius Anastasi; Stephen Zammit

#### **Affiliations**

Karin Grech Hospital, Malta

#### Introduction

To assess the feasibility and challenges involved in the implementation of a 6-week program of functional electrical stimulation (FES) of the upper limb using Bioness H200, at a local rehabilitation hospital.

## **Materials & Methods**

Occupational therapists at Karin Grech Hospital for inpatient rehabilitation were trained in FES using Bioness H200. Patients with either hand weakness or increased tone were recruited and administered daily Bioness FES for 6 weeks, once contraindications were excluded. Tone, grip strength and manual muscle power were scored using the Modified Ashworth Scale, a hand grip dynamometer and the MRC scale respectively, once on first presentation and once immediately after completion. Data was collected using custom-designed proformas and later inputted on Microsoft Excel for analysis.

#### Results

9 patients were initially included; 1 patient was excluded due to the development of cardiac arrhythmias. Of the 8 patients included in the final study, 7 had unilateral paraparesis following stroke and 1 had bilateral upper limb weakness following cervical corpectomy. Analysis of parameters taken showed no significant change in tone within the 6 week period, with a mild increase in gross grip (mean= 1.66N), pincer grip (mean= 0.54N) and MRC score (mean=0.75) although these were not statistically significant.

#### **Discussion**

## Conclusion

Successful training and standardisation of protocol on FES administration using Bioness H200, as well as quantification of various outcomes was achieved successfully and was found to be feasible, supporting a larger study to continue in this direction locally.

#### References

# Abstract: 94 - Date: 2019-06-27 16:24:38pm

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## **Topic of Summary**

Cardiovascular and pulmonary prevention and rehabilitation

#### **Title of Summary**

EARLY REHABILITATION IN PATIENTS WITH TEMPORARY PACE MAKER IN INTENSIVE CARE UNITS

#### **Keywords**

early rehabilitation, temporary pace maker

#### **Authors**

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## Introduction

OBJECTIVE Cardiac rehabilitation (CR) is an effective but underprovided treatment for patients recovering from acute cardiac events i.e. acute myocardial infarction (AMI), percutaneous coronary interventions (PCI) and coronary artery bypass surgery (CABG). There are no any CR international guidelines for patients with a temporary pacemaker while there waiting for permanent one. The aim of this study is to define whether CR is efective and safe in the setting of temporary transvenous pacing.

## **Materials & Methods**

We have examined 51 patients hospitalized in intensive care unit. Eighteen of them were hospitalized with diagnosis of acute myocardial infarction (AMI) complicated by AV block and 33 patients with AV block in other conditions. All patients have indications for temporary pacing. We have an early rehabilitation program on every day basis which includes exercise for peripheral circulation and sitting on the edge of a bed. Before and after the rehabilitation program we registered a blood pressure.

## Results

There was not any significant rise of blood pressure observed during and after an early rehabilitation program, and there were no tachyarrhythmias and any other complication noticed.

#### Discussion

#### Conclusion

The CR will accelerate patients return to their desired levels of daily activity. It will also improve patient's satisfaction. In our study we haven't registered any complication during an early rehabilitation program. The patients were in satisfactory capacity. Although larger studies are needed, these data suggest that this program is safe and effective.

#### References

# Abstract: 97 - Date: 2019-06-27 20:43:17pm

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## **Topic of Summary**

PRM in paediatric problems

#### **Title of Summary**

THE ASSESSMENT OF THE QUALITY OF LIFE AFTER PERTHES DISEASE- more than 10 years following up study

#### **Keywords**

Perthes disease, Harris hip score

## **Authors**

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### Introduction

To evaluate the final outcome of Perthes disease measured by Harris hip score scale( HHS) and to identify the factors that have the greatest impact on long-term prognosis and whether there is a difference in the outcome in relation to the treatment method.

#### **Materials & Methods**

Following up observational study (from 1996-2018) that was carried out in Specialized Rehabilitation Hospital Banja Koviljaca and University Children's Hospital, Belgrade. The first group included 20 patients (22 hips) treated with Salter's osteotomy and the second 20

patients (23 hips) treated with Atlanta orthosis. \r\nThe range of motion of the hip and the limbs length were measured at the beginning of the research, also as Catterral and Herring classification. After a minimum of ten years clinical evaluation and HHS testing (<70 poor, 70-79 satisfactory, 80-90 good, 90-100 excellent result) were done.\r\n

#### Results

The average age of patients at the final examination was 19.04 years. The average HHS score in the first group was 88.04 and in the second 92.21. There was no statistically significant difference between groups (p=0.099). The statistically significant correlation of negative direction between HHS and age was found (p<0.001) as well as between HHS and initial damage (Catterall p<0.021, Herring p<0.019).

#### **Discussion**

#### Conclusion

The long-term outcome of Perthes disease according to the HHS is "excellent" (90.17), regardless of the type of treatment. The age at the onset of the disease and the degree of the initial anatomical damage have been determined as the most influential factors on the outcome.

#### References

## Abstract: 102 - Date: 2019-06-28 09:06:59am

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## **Topic of Summary**

Sports injury rehabilitation

#### **Title of Summary**

THE MANAGEMENT AND TREATMENT OF PATELLOFEMORAL PAIN SYNDROME

## Keywords

#### **Authors**

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## Introduction

Patellofemoral pain syndrome is the most common cause of knee pain in the outpatient setting. Originating from the contact of the posterior surface of the patella with the femur.It is

caused by physical and biomechanical changes in the patellofemoral joint during knee flexion, extension and particularly with overloading of the joint. \r\nThe purpose of this study was to focus on the implementation of a comprehensive rehabilitation program.\r\n

#### **Materials & Methods**

Thirty-three (33) participants with patellofemoral pain syndrome aged between 16-40 years were recruited. We separated them randomly in three groups a physical therapy a R.I.C.E (treatment) and a placebo group. The physical therapy group included quadriceps retraining, patellofemoral joint mobilization, tecar and daily home exercises. The R.I.C.E treatment consisted of Rest, Ice, Compression, Elevation, the placebo treatment consisted of sham ultrasound and light application of a nontherapeutic gel. \r\n\r\n

#### Results

All three groups have followed a course of rehabilitation and recovery for six weeks. At the beginning and at the end of the program, all the participants submitted to Lysholm score questionnaire. There was statistically significant difference between the physical therapy groups and placebo group. Patients in both treatment groups (physical therapy and R.I.C.E) demonstrated that the physical therapy group is more effective than R.I.C.E group.

#### Discussion

#### Conclusion

The results of this study indicate that the physical therapy is the first line of the treatment and R.I.C.E showed some effectiveness in the treatment of patellofemoral pain syndrome.

## Abstract: 104 - Date: 2019-06-28 11:35:06am

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## **Topic of Summary**

Neurorehabilitation, spasticity

## **Title of Summary**

Strain sonoelastographic evaluation of gastrocnemius muscle intrinsic stiffness after botulinum toxin-A injection in chidren with cerebral palsy

### **Keywords**

strain ultrasound elastography, cerebral palsy, botulinum toxin A injection,gastrocnemius muscle

#### **Authors**

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#### Introduction

To evaluate the stifness of gastrocnemius muscle (GCM) in children with cerebral palsy (CP) by strain ultrasound elastography (EUS) and to study the sonoelastographic changes and its correlations with modified Ashworth scale (MAS) after botulinum toxin-A (BTA) injections.

#### **Materials & Methods**

This is a prospective study with experimental aim on children with spastic CP followed in the Physical Medicine department of Fattouma Bourguiba University Hospital in Monastir. A total of 15 children requiring BTA injections to GCM were included in the study. Muscle stifness was evaluated by strain EUS before the procedure,1,2,3 weeks, 1,3 and 6 month post-injection. Stifness was also assessed with the MAS at the same time. Strain index values (SIV) and MAS scores before and after the treatment were compared. A correlation between SIV and MAS grades before and after treatment was sought.

#### Results

The mean age was 6,8 years±3,85 and the mean body weight was 21,4kg±7,8. The average MAS score values were 2,5 before BTA. Abobotulinum toxin A injections were administered to 5 children with an average dose of 180±179,44 units and Onabotulinum toxin A injections were administered to 10 children with an average dose of 63±27,51 units in GCM. SIV were measured as 2,38±0,57 before BTA and as 1,7±0,66 one month after BTA. A positive correlation was also found between SIV and MAS grades (r=0.791,p<0.01) at different times of assessment.

#### Discussion

## Conclusion

Strain EUS is a promising diagnostic tool for assessing stiffness in spastic muscles, in establishing the treatment plan and monitoring the effectiveness of the therapeutic modality.

# Abstract: 107 - Date: 2019-06-28 13:47:12pm

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## **Topic of Summary**

Pain management in PRM

## **Title of Summary**

THE ROLE OF ULTRASSOUND GUIDED PROCEDURES IN PAIN MANAGEMENT

### **Keywords**

Ultrasound; procedures; pain;

#### **Authors**

Calado, Duarte; Barbosa, Jorge; Pinho, Sérgio; Gonçalves, Eduardo; Monsanto, João; Tomás, Nuno; Andrade, Miguel; Ângelo, Cristina;

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#### Introduction

Access pain evolution and functional impairment in musculoskeletal conditions submitted to ultrasound guided procedures (UGP).

#### **Materials & Methods**

Prospective, observational, open study of patients that underwent an UGP between 11/2018 and 05/2019. Pain magnitude was evaluated through an assessment in which maximum, current and minimum pain levels were registered according to the numeric pain rating scale. Functional impairment in daily life activities (DLA) and quality of life (QoL) was assessed through a Likert scale. The assessment was performed presentially before the procedure, and by telephone inquiry 1, 3 and 6 months after the procedure. The following data are collected: date of procedure, sex, age, diagnosis, intervention area, type of procedure (infiltration, aspiration, hydrodistension, hydrodissection, needling), drugs (lidocaine, bupivacaine, methylprednisolone, betamethasone, triamcinolone, hyaluronic acid, saline solution). Patients that couldn't provide data or that underwent conventional rehabilitation, surgery or other procedure of the intervention area during the assessment period were excluded. IBM-SPSS software was used for data analysis and a p value <0.001 was considered statistically significant.

## Results

268 procedures of 199 patients were initially included. 75% were women, medium age was 61.7 years (SD +13.3). There was a statistically significant improvement of maximum pain levels and pain impairment in DLA and QoL. The improvement on current and medium pain levels was not statistically significant.

## Discussion

#### Conclusion

UGP are useful and efective in pain management, allowing improvement of functional independence in DLA and QoL. Limitations of the study: lack of control group, researchers were not blinded and difficulty of telephone inquiry.

#### References

- Centro Hospitalar Lisboa Ocidental\'s investigation department;\r\n- Centro Hospitalar Lisboa Ocidental\'s Physical Medicine and Rehabilitation department;

## Abstract: 109 - Date: 2019-06-28 15:31:14pm

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## **Topic of Summary**

PRM in orthopaedics and musculoskeletal disorders

## **Title of Summary**

Evaluation of the Effectiveness of Treatment of Ankylosing Spondylitis Patients in the Thermal Spa and Thermal Galleries with Radon

## **Keywords**

Spondyloarthritis, Rehabilitation-Radon, Klinikum Bad Gastein

## **Authors**

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## Introduction

For more than 70 years patients suffering from rheumatic diseases have been treated with Radon222\r\nin the Bad Gastein thermal galleries (37-41,5 Í! C).\r\nHyperthermia treatment has been well documented to exert analgesic effects in inflammatory\r\ndisorders and to reduce systemic levels of the anti-inflammatory cytokine.\r\nThe individual treatment at Klinikum Austria-Bad Gastein includes a unique therapy combining radon-\r\nrich thermal spa (36-38 Í! C) and thermal galleries, resulting in significant benefits after 3 weeks, and\r\ncontinuing up to 6 months benefits vs. standard treatments.\r\nThis study presented results of objective indicators of treatments.\r\n

## **Materials & Methods**

Personalized treatment at Klinikum Austria, consisted of a 3-week \r\ntherapy:individualised exercise, breathing exercise, hydro and mud-therapy, massage, radon-rich\r\nthermal spa (for 30 min.), targeted patient education and an average of 10 time admittance (per hour)\r\n to the thermal gallery. At admission and after treatment the following were observed: VAS (0-10),\r\n chest expansion, morning stiffness and BASDAI.\r\n

#### Results

28 patients analysed during 2018. \r\nAt discharge VAS was 60% better than at admission \r\nAt discharge BASDAI was 35% better than at admission\r\nMeasurement of chest expansion: at discharge 25%\r\nimprovement compared to admission.\r\nMeasurement of morning stiffness: at discharge 42%\r\nimprovement compared to admission\r\n

## **Discussion**

## Conclusion

Through the individual rehabilitation programme a 60%\r\npain reduction was achieved in patients with AS after \r\ntreatment with low doses of Radon in the thermal galleries of\r\nBad Gastein and BASDAI as additional non-pharmacological therapy.\r\nThe treatment considerably increases the quality of patient\'s lives.\r\n\r\n

#### References

## Abstract: 110 - Date: 2019-06-28 15:36:34pm

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## **Topic of Summary**

Neurorehabilitation, spasticity

## **Title of Summary**

The curved-Timed Up and Go test: a new tool to assess balance disorders in Parkinson\'s disease

## Keywords

Assessment; validation; gait; rehabilitation

## **Authors**

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## Introduction

Patients with Parkinson's disease (PD) present often balance disorders. The Timed Up and Go (TUG) test is a validated test to assess balance disorders even in this population. Since curved walking – a functional walking - is affected in patients with PD we have developed a new test to assess balance in the curved walking: the Curved-TUG (c-TUG). Aim of this work is to offer a preliminary validation of the c-TUG in PD.

## **Materials & Methods**

The C-TUG is similar to the TUG except for the walking direction that is curved. Patients have to walk on a colored line present on the floor having a radius of 1.2 meters. Stride length and

duration of the stance phase differ between the inner and outer leg. In this way one leg will be the inner in the going, whil will be the outer in the coming.\r\nAt the moment, eleven patients with PD (74y.o.+10; 7 males) have been included in this study. They were assessed by means of the TUG, the Berg Balance Scale (BBS), the Falls Efficacy Scale (FES), and the 10 Meter Walk Test (10MWT).

#### Results

Preliminary results showed that the C-TUG correlated significantly (p<0.05) with BBS (-0.75), FES (0.68) and 10MWT (-0.88), while the TUG correlated significantly only with 10MWT (-0.92).

## Discussion

## Conclusion

Considering these preliminary data, we can assume that the c-TUG could be a viable option to assess balance in PD, probably better than the TUG. These results need to be confirmed in a larger sample.

## Abstract: 113 - Date: 2019-06-28 22:20:37pm

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## **Topic of Summary**

Neurorehabilitation, spasticity

## **Title of Summary**

Effectiveness of botulinum toxin in the management of children with spasticity

## **Keywords**

botulinum toxin, spasticity, children

#### **Authors**

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#### Introduction

The interest of this study is to evaluate the effectiveness of botulinum toxin (BT) in the management of children with spasticity

#### **Materials & Methods**

A retrospective study was conducted in our department during 02 years [2017-2019]. This study included 60 children with spasticity who received a botulinum toxin injection.\r\nThe assessment of spasticity pre and post-injection toxin was based on the Modified Ashworth Scale and the Functional Independence Measure for Children. \r\n

## Results

The average age was 10,15 years [2,5-17], there was a modest male predominance (SR; 1,30). The symptomatology was varied; cerebral palsy in 63%, and ischemic stroke in 20%. The assessment of spasticity was done by the Modified Ashworth Scale; 42% of the toxinated muscles were at 2, 40% at 3 and 4% at 4. The average of the Functional Independence Measure for Children was at 55/126. Botulinum toxin has been indicated for functional (80%) and/or hygienic (20%) reasons. The valuation of spasticity at 3 months after botulinum toxin injection; 15% of toxinated muscles were at 2, 25% at 1+ and 60% at 1, the average of Functional Independence Measure for Children was at 70/126

## **Discussion**

## Conclusion

Despite its misperception in our context and the difficulty of its realization, our study states the effectiveness of botulinum toxin injection in the treatment of spasticity as well as its place in improving functional disability in children.\r\nThis injection must be complemented by an immediate rehab to stretch the toxinated muscles and restore their functions.\r\n

## Abstract: 117 - Date: 2019-06-28 23:39:11pm

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## **Topic of Summary**

Neurorehabilitation, spasticity

## **Title of Summary**

Descriptive epidemiological study of the use of antiplatelet agents and / or anticoagulants in patients with spasticity treated with infiltration of IncobotulinumtoxinA for one year.

## **Keywords**

antiplatelet, anticoagulants, spasticity, IncobotulinumtoxinA

#### **Authors**

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## Introduction

Patients under treatment with anticoagulants or antiplatelet agents may have a higher risk of complications due to bleeding after intramuscular infiltrations.\r\nObjective: evaluation of the use of antiplatelet agents and/or anticoagulants, of the patients who were infiltrated with incobotulinumtoxinA.

## **Materials & Methods**

Descriptive, retrospective study of one year of the patients treated in the spasticity department. Variables: sex, age, spasticity cause, Side affect, type of anticoagulants/antiplatelet, cause for anticoagulation/antiplatelet therapy. Analysis: SPSS version19.0

## Results

Total patients: 156 (90 men, 65 women). Spasticity causes: stroke 88, PCI 35, spinal cord injury 7, spastic paralysis 6, brain tumor 5, multiple sclerosis 5, TCE 3.\r\n76 patients (48.71%) were under treatment with anticoagulants/antiplatelet. Of these, 63 with antiplatelet (clopidogrel: 33. AAS: 25, triflusal 15) and 13 with anticoagulants (Warfarin: 5, Apixaban 3, Dabigatran 2, LMWH 2 and Ribaroxaban 1). All of the 5 patients on warfarin therapy had an INR of 2-3. Cause for antiplatelet/anticoagulation: prophylaxis of stroke 63, atrial fibrillation 8, and DVT 2.\r\nNo anticoagulant and/or antiplatelet therapy was withdrawn prior to infiltration. No significant bleeding complications have been recorded.\r\n

## **Discussion**

#### Conclusion

Among the patients who were infiltrated, many were being treated with antiplatelet and/or anticoagulants. According to different studies, the possibility of significant bleeding is small.

But general recommendations are important, inform the patient about the potential risk of bleeding, factors that may increase the risk, use of less invasive needles, use of ultrasound guidance, application of pressure after infiltration and surveillance of the infiltration site.

#### References

## Abstract: 119 - Date: 2019-06-29 10:30:23am

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## **Topic of Summary**

Advances in PRM diagnostics

## **Title of Summary**

Ultrasonography of salivary glands in primary Sjogren's syndrome

## **Keywords**

salivary gland, ultrasonography, Sjogren's syndrome

## **Authors**

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## Introduction

To analysis ultrasonography (US) changes of salivary glands (SG) in patients with primary Sjogren's syndrome (pSS) and association US findings with symptoms of dryness, disease activity and biopsy of minor salivary glands (MSG).

#### **Materials & Methods**

This study included 205 pSS patients (mean age 53.9±11.5, disease duration 5.6 years) and 87 healthy controls (mean age 52.3±14.7). The disease activity was evaluated by EULAR SS disease activity index (ESSDAI). Parotid and submandibular salivary glands were assessed by US. Statistical analyses were performed using SPSS, Version 19.0.

## Results

Xerophtalmia and xerostomia were presented in 185/205 (90.2%) and 186/205 (91.2%), respectively. The majority of pSS patients 88/205 (43%) had moderate disease activity. Biopsy of MSG was positive in 140/172 (81.4%) pSS patients. US abnormalities were established in 197 (96%) pSS patients and in 16 (18%) controls (p<0.0001). Pathological sizes of SG were more frequently in pSS patients than controls, 111 (54.2%) vs. 3 (3.4%) patients, respectively (p<0.0001). The echogenicity of the SG was pathological in 142 (69.3%) pSS patients and in 5 (5.7%) control group (p<0.0001). Most of pSS patients had pathological inhomogeneity, 197/205 (96.1%) vs. 16/85 (18.4%) in control group (p<0.0001).

After adjustment for potential confounders variables, dry mouth, ESSDAI and biopsy of MSG were significantly associated with advanced US changes of SG (p<0.05).

## **Discussion**

## Conclusion

Our findings confirm that most of established pSS patients had pathological US features. Degree of xerostomia, objective disease activity and biopsy of MSG had predictive value for advanced US change of salivary glands. \r\n \r\n

## Abstract: 122 - Date: 2019-06-29 12:48:53pm

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## **Topic of Summary**

Advances in PRM diagnostics

## **Title of Summary**

THE IMPORTANCE OF COLOR DUPLEX SCAN (CDS) OF THE SUPRA-AORTIC BRANCHES IN THE EARLY DETECTION OF CEREBROVASCULAR OCCLUSIVE DISEASE OF CAROTID ARTERIES AND IN STROKE PREVENTION

## Keywords

Stroke, color duplex scan

#### **Authors**

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## Introduction

To show the importance of preventive CDS examination of carotid arteries through the analysis of performed examinations during a 5- year period in early detection of cerebrovascular occlusive disease of the carotid arteries and also in prevention of stroke.

#### **Materials & Methods**

Retrospective cross section study that was carried out in Specialized Rehabilitation Hospital, Banja Koviljaca from 2014-2019. The research material was electronic database of patients. 595 examinees were observed. Four groups of patients according to the level of stenosis: Istenosis up to 20 %, II ranging from 20-40%, III ranging from 40-75% and IV group- over 75%.

## Results

During a 5 – year period 595 CDS examinations of supra-aortic branches were performed. The positive results were found at 47.9% patients. Among those patients 73.6 % of them were required to go on yearly follow-up (stenosis from 20 to 40%), 14.03% patients needed assessment in 6 months (stenosis from 40-75%) and for 12.28% of examinees the operative treatment was recommended (stenosis more than 75%). The clinical findings of the other 52.1% examinees were diagnosed with finding of no clinical importance (normal result or stenosis up to 20%).

## Discussion

## Conclusion

The high percentages of results that required patients to do a yearly follow up confirmed the importance of CDS in early detection of cerebrovascular occlusive disease of carotid arteries. The reliability of this diagnostic procedure in detecting severe degrees of stenosis and in

recommending timely operative treatment has confirmed its importance in the prevention of stroke.\r\n\r\n

## Abstract: 126 - Date: 2019-06-29 15:37:56pm

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## **Topic of Summary**

Cardiovascular and pulmonary prevention and rehabilitation

## **Title of Summary**

Anatomical assessment of muscle mass by ultrasound in patients with heart failure who attend a cardiac rehabilitation program

## **Keywords**

muscle, ultrasound, heart failure, rehabilitation

#### **Authors**

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#### **Affiliations**

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## Introduction

Sarcopenia is defined as age-related muscle wasting, but it has also been observed in several diseases, including heart failure (HF).\r\nObjectives:\r\n-Assess changes in muscle mass of patients with heart failure in a cardiac rehabilitation program (CRP) by ultrasound.\r\n-Define changes in muscle strength in quadriceps by dynamometer and changes in functional capacity through oxygen consumption measured in ergospirometry\r\n

#### **Materials & Methods**

Quasi-experimental study before and after in patients with stable heart failure, grade II-III of NYHA who attend a CRP.\r\nVariables: age, sex, HF type, transverse measurement by ultrasound of the anterior rectus section and internal vastus (AR+IV), maximum oxygen consumption before and after, and specific strength in quadriceps by isometric exploration with a dynamometer before and after. Analysis: SPSS version19.0

## Results

Total patients:12 (66,6% males, 33,3% females). Average age: 57,5 years. Type of HF:75% dilated, 22,22% ischemia and 8% valvulopathy.\r\nMeasurement of AR+IV before-after: right leg 33,95 vs 36,7mm and left leg 34,16 vs 37,92mm. The maximum oxygen consumption at the beginning was 21,38 ml/min/kg, and decreased to 13,97 at the end.\r\nMeasure of strength in quadriceps, in kg, before-after: right leg 38,16 vs 44,34 and left leg, 36,3 vs 40,87.

#### Discussion

## Conclusion

Carrying out a cardiac rehabilitation program you get an improvement in muscle mass and strength. The functional capacity measured by the oxygen consumption decreases in our study, in the possible relation to the small sample size

## Abstract: 128 - Date: 2019-06-29 16:08:25pm

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## **Topic of Summary**

PRM in orthopaedics and musculoskeletal disorders

## **Title of Summary**

Catastrophizing in patients with knee osteoarthritis in physical medicine and rehabilitation

## Keywords

catastrophizing; knee osteoarthritis

#### **Authors**

Sghir Mouna; El Arem Soumaya; Haj Salah Aymen; El Hersi Takieddine; Maaoui Rim; Kessomtini Wassia

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## Introduction

: Pain is among the most frequently reported, bothersome, and disabling symptoms described by patients with knee osteoarthritis. Furthermore, catastrophizing, a set of negative emotional and cognitive processes, is increasingly implicated in the experience of pain in osteoarthritis (OA).\r\nThe aim of this study was to analyze the correlations between severity of Knee OA and catastrophizing.\r\n

## **Materials & Methods**

A cross-sectional study was conducted in patients with knee OA referred to the PMR department of Mahdia in March 2019. Socio demographic data, history of knee osteoarthritis as well as radiographic data were collected. The severity of t Knee OA was assessed using Lequesne Index. Pain catastrophizing was measured by the Pain Catastrophizing Scale (PCS).\r\n

## Results

Results: Forty patients were included. The mean age was  $57.3 \pm 9.1$  years and the sex ratio 0.11. Most patients (66.7%) were referred from general practitioners. The mean evolution of the OA was 3.5 years. The mean Lequesne index was  $10.8 \pm 2.33$  and the mean PCS was  $26.93 \pm 6.5$ . No associations were found between the PCS and the Lequesne index (p = 0.3, r = 0.1) or between Lequesne score and the radiographic stage (p = 0.39).\r\n

## **Discussion**

#### Conclusion

PCS was high among patients with knee OA followed in rehabilitation. A correlation between catastrophism and severity wasn't established in our study.

#### References

## Abstract: 135 - Date: 2019-06-29 17:28:34pm

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## **Topic of Summary**

PRM in orthopaedics and musculoskeletal disorders

## **Title of Summary**

Radial shock wave therapy in talalgia related to plantar fasciitis

## **Keywords**

talalgia-Radial shock wave therapy-pain

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## Introduction

To evaluate the short- and medium-term efficacy of radial extracorporeal shock wave therapy (RESW) in plantar fasciitis (PF), using clinical and functional parameters

#### Materials & Methods

This is a prospective study conducted over a 12-month period. Included patients with AP adhered to RESW therapy. Short- and medium-term follow-up (6-12 weeks) was done for pain by pain EVA and for function by disability EVA, walking speed and by FAAM

## Results

We included 42 patients. The mean age was  $40.2 \pm 8.8$  years [28-56 years] with a female predominance (66.7%). The attack was bilateral in 50% of cases. At the 6 and 12 week assessment, the pain EVA dropped from 7.75 to 4.4 and to 3 respectively. Functionally we observed a significant decrease in functional gene (walking perimeter, walking speed and FAAM score)

## **Discussion**

## Conclusion

RESW therapy can be used in the treatment of PF for its positive effects in the short and medium term. Nevertheless, other randomized studies would be necessary, following a standardized program and studying the interest of this therapy in the long term.

# Abstract: 145 - Date: 2019-06-29 20:25:23pm

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### **Topic of Summary**

PRM in paediatric problems

## **Title of Summary**

Management and functional outcome of neonatal brachial plexus palsy in a Tunisian population

## Keywords

neonatal brachial plexus pulsy, Mallet, Gilbert-Raimondi

#### **Authors**

El Arem Soumaya; Sghir Mouna; Haj Salah Aymen; El Hersi Takieddine; Ben Cheikh Asma; Said Wafa; Kessomtini Wassia

#### Affiliations

CHU Taher Sfar Mahdia; Sahloul hospital Sousse

## Introduction

The aim of this study was to describe the management and functional outcome of Neonatal Brachial Plexus Palsy (NBPP) in a Tunisian population.

## **Materials & Methods**

We conducted a retrospective cohort study of children diagnosed with NBPP followed at the physical medicine and rehabilitation (PMR) department in Taher Sfar hospital of Mahdia, Tunisia between 2005 and 2014. Self-reported demographics, delivery history, management procedures and functional evolution were recorded. Throughout the follow-up, the functional recovery at the shoulder and at the elbow were assessed respectively by the Mallet score and the Gilbert-Raimondi scale.

## Results

We recruited in our study 77 patients with 80 NBPP. Their mean age was  $7.7 \pm 3.6$  years and the mean age at the first consultation in PMR was  $15 \pm 28$  days. Functional rehabilitation was followed by 98.8% of the patients and it was regular during the first two years in 66.3% of the cases. Thirty five percent of the patients underwent surgery: 18.8% tendon transfer, 6.2% nerve surgery and 10% derotation osteotomy. At last check, a good functional recovery at the shoulder (Mallet score  $\geq$  III) was noted in 70% of the cases. The Gilbert-Raimondi scale showed a good recovery (scale = III) in 65% of the NBPP. The functional outcome wasn't correlated with the gender (p = 0.05) nor the other delivery history parameters.

## **Discussion**

## Conclusion

The functional outcomes of affected infants with NBPP in our population showed good recovery. It required multidisciplinary management incluiding functional rehabilitation and surgical measures.

## References

none

# Abstract: 146 - Date: 2019-06-29 20:34:21pm

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## **Topic of Summary**

Pain management in PRM

## **Title of Summary**

Pain associated factors in Tunisian Post-polio patients

## **Keywords**

pain-post polio syndrome

#### **Authors**

Migaou Houda; El Fani Nadra; Boudokhane Soumaya; Nouili Tasnim; Jellad Anis; Ben Salah Frih Zohra

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#### Introduction

The purpose of our study was to assess pain and identify its associated factors in patients with post-polio syndrome (PPS).

## **Materials & Methods**

This is a descriptive study involving all PPS patients, followed at the Physical Medicine and Rehabilitation department of the Monastir University Hospital. \r\nOur patients were evaluated using the Visual Analog Scale (VAS) to measure pain intensity, the Multidimensional Fatigue Inventory (MFI-20) and the Borg RPE scale ,the functional capacity by the six minutes walk test (6MWT) and psychological disorders with the Hospital Anxiety and Depression scale HAD.\r\n

#### Results

We collected 45 patients in our study, the average age was 52.4 years [±7.5].\r\nThe sex ratio was 0.7(female predominance), the most common symptoms were fatigue and muscle and joint pain. \r\nThe average pain VAS was 4.4 ± 1.9. The intensity of the pain was greater in the unaffected limb than in the limb reached (4.7 vs 4.3).\r\nMost of our population (40%) had moderate pain. Pain considered very intense (pain EVA ≥7) in 8 patients.\r\nThe intensity of pain was positively correlated with general fatigue and reduced motivation of the MFI-20 items, fatigue assessed by the Borg RPE scale, and HAD-D and HAD-A scores.\r\nWe found also a statistically significant and negative correlation between pain intensity and the 6MWT.\r\n\r\n

## Discussion

## Conclusion

The findings indicate that pain is a persistent and common problem in persons with PPS, highlighting the need for effective and accessible pain treatments for this population.

## Abstract: 147 - Date: 2019-06-29 20:41:01pm

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## **Topic of Summary**

PRM in orthopaedics and musculoskeletal disorders

## **Title of Summary**

Epidemiological profile of the Post –Polio-Syndrome in Tunisian rehabilitation

## **Keywords**

post -polio syndrome - epidemiological

## **Authors**

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Physical Medicine and Rehabilitation Department, University Hospital of Monastir, Tunisia.

#### Introduction

The aim of this study was to highlight the epidemiological characteristics of post-poliosyndrome (PPS) and to identify the associated factors.

## **Materials & Methods**

This is a descriptive study involving all PPS patients followed at the Physical Medicine and Rehabilitation department of the Monastir University Hospital.\r\nThe data analyzed were epidemiological and clinical characteristics. \r\n

## Results

Forty five patients were included in this study, the average age was 52.  $4 \pm 7$ . 5 years with a female predominance (sex ratio 0.7). Ten patients (22.2%) were from rural areas and 35 patients (77.8%) were from urban environments.\r\nThe majority of our patients had office work (44.4%).\r\nThe mean age of acute poliomyelitis was 25.3 [4-72].\r\nThe majority of our patients (86.7%) were married, and the average BMI was  $28.7 \pm 6.5$ . \r\nWe found that the most frequent reason for consultation was orthotic turnover in 12 patients (26.7%) followed by unequal length of the lower limbs in 11 patients (24.4%).\r\nThe majority of our patients had monoplegic involvement (77.8%).\r\nThe most common symptoms were fatigue and muscle and joint pain.\r\nSixty six percent of our patients benefited from functional rehabilitation sessions related to the symptoms of PPS.\r\nThirty-two patients (71.1%) had assistive devices and the majority had walking braces: 19 patients (59.4%). \r\n

#### **Discussion**

## Conclusion

The SPP is a pathology less recognized by practitioners in Tunisia, yet it affects a relatively young population and still active on a professional level with a particular social and medical profile.

# Abstract: 150 - Date: 2019-06-29 20:57:42pm

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## **Topic of Summary**

PRM in orthopaedics and musculoskeletal disorders

## **Title of Summary**

Descriptive cross-sectional epidemiological survey on podiatry disorders in a population of 100 teachers in primary schools

## Keywords

podiatry disorders; teachers

#### **Authors**

Borgi Ons<sup>1</sup>; Herchi Wafa<sup>2</sup>; Moncer Rihab<sup>1</sup>; Jemni Sonia<sup>1</sup>; Khachnaoui Fayçal<sup>1</sup>

## **Affiliations**

<sup>1</sup> Physical medicine department, Sahloul Hospital, Sousse, Tunisia; <sup>2</sup> Physical medicine department, Kasserine Hospital, Tunisia

## Introduction

To describe the frequency of podologic disorders among teachers in the school.

### **Materials & Methods**

Our study is descriptive, cross-sectional on teachers from 4 primary schools in the city of Kasserine having been practicing profession during 2017 and 2018. Podiatry disorders were investigated by clinical evaluation and examination with podoscope.

## Results

One hundred teachers were assessed with a mean age of 48 years and a sex ratio of 0.44. Ankle and foot pain were noted in 48% and 17% of cases, respectively. Foot pain was dominated by talalgia (20%), plantalgia (16%) and metatarsalgia (12%). The clinical examination showed lower extremity varicose veins in 18 teachers and lower extremity edema in 13 teachers. Calluses were noted in 31 teachers; their most frequent locations were the heel (66%), regarding M5 (22%) and M1 (15%). \r\nFoot tendonitis were diagnosed in 12 teachers (5 cases of Achilles tendonitis, 2 cases of long fibular tendonitis, 3 cases of posterior tibial tendonitis and 2 teachers had a plantar fasciitis). Podoscope examination revealed 12 cases of flat foot, 8 cases of hollow foot, and 4 cases of varus of the hindfoot.

## **Discussion**

## Conclusion

This study allowed to better understand the effects of orthostatism on the appearance of podalgia, especially among teachers hence the interest of foot safety in the workplace. A prevention strategy for musculoskeletal disorders should be developed not only for teachers but for all occupations requiring prolonged periods in a standing position.

## Abstract: 152 - Date: 2019-06-29 22:00:19pm

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## **Topic of Summary**

Pain management in PRM

## **Title of Summary**

Evaluation of pain for mothers of children with cerebral palsy

## **Keywords**

#### **Authors**

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## Affiliations

Physical department, Sahloul hospital, Sousse, Tunisia

#### Introduction

The purpose of this work is to Describe the clinical and socio-demographic profile and to evaluate the intensity and the impact of pain for these mothers.

### Materials & Methods

This is a prospective descriptive study conducted during the period between January and May 2019 that included mothers of children with CP followed by outpatient visits. The pain and its impact were evaluated by the Brief Pain Inventory.

#### Results

Thirty-six mothers were included in the study with an average age of 36 years. They were married in 92% of cases with modest monthly income in 64% of cases. The majority of mothers were housewives (72%) with a primary school level of 34% of cases. The number of children was 1 in 25% and 2 in 33% of families. Chronic pain lasting longer than 3 months was reported in 33 women (92%). They were frequent, daily and once a day in 39% and 34% of cases respectively. The predominant localization of pain was the spine (80%): lumbar (78%) and cervical (36%). In addition, 56% and 48% of mothers had lower and upper limb pain respectively. The pain intensity was 6/10 according to the score of Brief Pain Inventory with a significant impact on general activity, work, sleep and mood.

## **Discussion**

#### Conclusion

Pain for mothers of children with CP is very often under diagnosed. The evaluation of pain and appropriate management should be systematic because of their significant impact on the quality of life of these mothers.

# Abstract: 154 - Date: 2019-06-29 22:17:38pm

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## **Topic of Summary**

PRM in paediatric problems

## **Title of Summary**

Pain for children with cerebral palsy

## **Keywords**

#### **Authors**

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## Introduction

The objective of this work is to describe the clinical and socio-demographic profile, and to evaluate the intensity of pain for children with CP.

### Materials & Methods

Prospective and descriptive study, including 36 children with CP, followed by outpatient visits, over a period of 5 months, from January to May 2019. The data collection was done by preestablished cards. The intensity of the pain was evaluated by the Brief Pain Inventory.

#### Results

A total of 36 children were enrolled in this study with an average age of 6 years with extremes ranging from 3 to 14 years. The predominant topographic involvement was quadriplegia for 20 patients with spasticity for 33 patients. The rank of children in the family was the first in 56% of cases. Seventy-seven percent of the children were from urban areas, and 64% had a modest socio-economic level. Pain lasting longer than 3 months was present for all patients. this pain was dailyfor 39% of children. The most common location of pain was the lower extremity: hip (75%), knee (86%) and foot (86%). Upper limb and spine were less frequent and objectified in 64% and 28% of cases respectively. The intensity of the pain was between a minimum of 3 and a maximum of 9 with an average of 6/10 according to the Brief Pain Inventory.

## **Discussion**

## Conclusion

Children with cerebral palsy frequently experience pain, mainly joint pain. The assessment of pain should be systematic because of its high prevalence and its significant impact on quality of life.

# Abstract: 156 - Date: 2019-06-29 22:35:27pm

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## **Topic of Summary**

Orthotics and prosthesis in PRM

## **Title of Summary**

Foot orthoses for Equinus deformity for hemiplegic patients: Functional results

## **Keywords**

Equinus; Foot orthoses; hemiplegic

#### **Authors**

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#### Introduction

\r\nThe aim of our work is to describe functional results after Foot orthoses and rehabilitation in hemiplegic patients with Equinus deformity of the foot.

### Materials & Methods

It is a retrospective study of 30 hemiplegics with paralysis of the levers, collected in the department of physical medicine and rehabilitation of Ibn Rochd University Hospital of Casablanca, over one year. The epidemiological data, clinical and quality of walking after orthosis equipment of muscle levers are evaluated by the functional ambulation classification (FAC).

## Results

The mean age was 60 years (37 to 83 years), 25 male, 20 ischemic stroke and 10 hemorrhagic stroke. Voluntary control at the level of the foot levers was: 0/5 in 20 patients, 1 / 5 patients in other 10 patients. All patients benefited from an orthoses of muscle levers and the walk was done at the admission with an English cane.\r\nWalk after rehabilitation: 60% of patients walk without help 26% walk with help AND 13% do not work.

## **Discussion**

#### Conclusion

the use of the levers orthoses finds its place to improve the walking pattern and bring more autonomy and stability.

# Abstract: 160 - Date: 2019-06-29 22:48:01pm

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## **Topic of Summary**

Robotics, virtual reality and innovatives techniques in PRM

## **Title of Summary**

The effect of Virtual Reality Rehabilitation on Postural Control in patients with Total Knee Replacement.

## **Keywords**

Virtual Reality, Postural control, Total knee replacement

#### **Authors**

S. Pournajaf; M. Goffredo; L. Pellicciari; T. Sasso D'Elia; M. Bertone; F. De Pisi; C. Damiani and M. Franceschini.

#### **Affiliations**

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#### Introduction

The efficacy of Virtual- Reality-Rehabilitation (VRR) on motor skills improvement in patients with Total Knee Replacement (TKR) was recently showed, compared to traditional therapy. This study aims to assess the effects of VRR on postural control in TKR patients.

## **Materials & Methods**

20 subjects were enrolled within 10 days after unilateral TKR and conducted 15 sessions (5 times/week; 45 minutes) of: postural control and proprioceptive exercises if assigned to Control Group-CG (10 subjects; 70.8±4.02 y.o.); or VRR standing on a balance board and receiving a real-time visual bio-feedback in serious video games with VRRS if in Virtual Realty Group-VRG (10 subjects; 68.5±9.37y.o.). Clinical assessments and computerized posturography (Open Eyes – OE; Closed Eyes – CE; Kistler force platform; 30 s; 100 Hz) were performed at baseline (T1) and the end of treatment (T2). Wilcoxon's test was used (p<0.05).

## Results

Statistically significant pre-post improvements was found in all clinical tests. Between-group difference was significant in TUG only. The COP measures showed significant pre-post variations of AP range OE and COP area OE in VRG only. Between-group variations were found in AP range OE, COP length OE, Mean VCOP OE. No significant differences were found in CE condition.

## Discussion

## Conclusion

Results suggested that VRR, as well as conventional therapy, improves clinical outcomes,. Significant between-group difference in TUG performance, in favour of VRG could be due to a better gain of static and dynamic balance in these subjects. Significant inter-group differences in a subset of COP measures, revealed by computerized posturography, indicate further analysis of COP signal on larger samples.

#### References

Khymeia Group s.r.l., Noventa Padovana (PD) - Italy.

## Abstract: 162 - Date: 2019-06-29 23:02:46pm

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## **Topic of Summary**

PRM in paediatric problems

## **Title of Summary**

Urodynamic profile of vesicosphincteric disorders for children

## **Keywords**

## **Authors**

E.Toulgui, S.Mtaoua, R.Moncer, G.Hamdi, W.Ouaness, S.Jemni, F.Khachnaoui

#### **Affiliations**

Physical department; Sahloul hospital; Sousse; Tunisia

## Introduction

The aim of this work is to describe the urodynamic profile of vesicosphincteric disorders in children.

## **Materials & Methods**

This is a prospective and descriptive study spanning four years (2013 to 2017), focusing on children referred to Physical Medicine and Rehabilitation Department in Sahloul University Hospital for a urodynamic assessment. The data collection was done by operating records established for this work and the statistical analysis was performed by the SPSS 22.0 software

### Results

A total of 81 children were included in this study with an average age of 10 years and extremes of 4 to 17 years and a female predominance with a sex ratio of 0.47. Metering was performed in 73 patients (90%) who had demonstrated a dysuric curve in 55% of cases with a significant post-micturition residue in 32% of cases. At cystomanometry, a hypersensitive bladder was found in 56% of cases, an unstable bladder in 49% of children, a reduced bladder capacity in 52% of cases and a hypo compliant bladder in 57%. Profilometry was performed for 52 children (64%) and showed sphincter insufficiency for 10 patients and

sphincter hypertonicity for only 4 patients. The urodynamic assessment, the latter was normal in 33% of the cases and objectified a central overactive bladder and an immature bladder in respectively 36% and 19% of the cases.

## **Discussion**

## Conclusion

The urodynamic examination allows to define the type of bladder dysfunction and the vesicosphincteric balance. This has a prognostic value for guiding therapy and monitoring patients.

# Abstract: 164 - Date: 2019-06-29 23:11:28pm

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## **Topic of Summary**

PRM in orthopaedics and musculoskeletal disorders

## **Title of Summary**

The impact of functional disability to fatigue in patients with rheumatoid arthritis

## **Keywords**

functional disability, fatigue, rheumatoid arthritis

## **Authors**

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#### Introduction

The aim of this stady was to estimate impact of functional disability to fatigue in patients with RA.

## **Materials & Methods**

A perspective study included 109 patients with random sample method for patients treated in in Niška Banja Institute. The average age of patients was 58.86±9.54 and the average disease duration was 10.74±7.43 godine. Functinal disability is represented with HAQ questionnaire filled in by patients themselves. Fatigue was measured by questionnaires for fatigue evaluation: Fatigue Facit Scala (FFS) and Visual Analog Scale Of Fatigue (VAS F). Comparison of numerical variables classiefied according to the type of normality was performed by ANOVA test. Statistic significance was at the level of < 0.05.

## Results

Average value of FFS, in patients with total functional disability was  $13.02 \pm 5.65$ , than patients with more severe disability  $21.01 \pm 7.62$ , (p<0.001) and patients with moderate functional disability  $32.29 \pm 7.27$ , (p<0.001). FFS was statistically significantly better in patients with moderate functional disability than patients with more severe disability (p<0.001)\r\nAverage value fatigue by estimated VAS F, in patients with total functional disability was  $75.38 \pm 13.26$ , that was statistically more significantly worse than patients with more severe disability  $65.42 \pm 18.59$ , (p<0.001) and patients that had moderate functional disability  $40.23 \pm 18.87$ . \r\n

## Discussion

## Conclusion

Our results have confirmed the hypothesis that functional disability has adverse impact on fatigue. Fatigue is not included in the disease activity core set measures and indices in RA.

## Abstract: 173 - Date: 2019-06-30 07:53:41am

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## **Topic of Summary**

PRM in paediatric problems

## **Title of Summary**

Paediatric's Low Back Pain

## Keywords

paediatric low back pain; children and adolescents; prevention; management.

#### **Authors**

Inês Santos Jorge\*1, Sara Amaral\*1, Carolina Moreira1, Rosa Amorim1 \* Both authors contributed equally

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## Introduction

Recently we have noticed a growing awareness of low back pain (LBP) in children and adolescents. With a prevalence rate up to 58% per year and an equally gender distributed, LBP is more common between 13 and 15 years. Associated risk factors are related to lifestyle, physical, school and psychosocial aspects. The etiology of LBP in children and adolescents differs significantly from that of adults. Although most causes of back pain in children are benign, there are serious conditions that must not be missed.\r\n\r\nAIM: To review paediatric LBP's management to prevent LBP in adults.

## **Materials & Methods**

Bibliographic research in databases Pubmed and Medline. Inclusion criteria: 1) metaanalyses, systematic reviews and reviews; 2) language: Portuguese, English and Spanish; 3) in humans; 4) last 10 years.

## Results

Trevelyan and Legg found that 13.9% of 245 children and adolescents had LBP and 98% of these complained some kind of disability, most commonly difficulty carrying their school bags. Pellise et al found that 9/10 adolescents can be considered healthy, while 10% can be a symptom of a multidimensional health problem. There is a wide differential that should be considered. Regular exercise and education appear to reduce LBP episodes in children aged 8 to 11 years. Preventive treatments cover postural hygiene content, the practice of physical therapy exercises and the promotion of physical activity.

## **Discussion**

## Conclusion

Serious pathology needs to be excluded. The combination of therapeutic physical conditioning and manual therapy is the most effective for paediatric LBP. Preventing LBP in children may prevent adult incidence.

## Abstract: 177 - Date: 2019-06-30 09:30:01am

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## **Topic of Summary**

PRM in paediatric problems

## **Title of Summary**

Clinical and urodynamic profile in elderly

## **Keywords**

geriatric, bladder disorder, urodynamic

#### **Authors**

Moncer Rihab; Bouenba M. Amin; Frioui Samia; Mtawaa Sahbi; Toulgui Emna; Ouannes Walid; Frigui Sinen; Jemni Sonia; Khachnaoui Faycel

#### **Affiliations**

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#### Introduction

To determine the clinical profile and evaluate the urodynamic examination data of elderly subjects with vesico-sphincteric disorders.

#### **Materials & Methods**

A retrospective study of patients aged more than 65 years old who consulted for micturition disorder between January 2015 and December 2016\r\n

#### Results

We counted 80 patients (8 men and 72 women) with a mean age of 69.67 +/- 4.8 years. 21.2% of the patients were diabetic and 14.3% of the men were followed for a prostate disease. The most frequent symptom was urinary tract leakage in 48.5% of cases, prolapse in 43.8%, and repetitive urinary tract infections in 7.7% of cases.\r\nFlowmeter revealed dysuria in 21.2% of cases. Cystomanometry had objectified a hypocompliant bladder, hypersensitive in 50% of cases and a hyposensitive bladder in 3.1% of cases. Sphincteric insufficiency was present in profilometry in 24.2% of cases\r\nThe therapeutic modalities considered were perineal reeducation in 25% of cases, treatment with anti cholinergic drugs in 40.6% of cases, baclofen and alpha blockers in 15.1% of cases.

## **Discussion**

#### Conclusion

The management of urinary incontinence in the elderly should be comprehensive. The challenge is to identify the causes of incontinence specific to aging as well as co-morbidities and environmental factors. An interrogation then a clinical and urodynamic examination make it possible to determine the origin and to define at best the type of urinary incontinence.

## Abstract: 178 - Date: 2019-06-30 09:33:16am

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## **Topic of Summary**

PRM in paediatric problems

## **Title of Summary**

Relationship between obesity and low back pain in childhood: A Descriptive cross-sectional study

## Keywords

Low back pain; children; BMI; Obesity; risk factors

#### **Authors**

Moncer Rihab1; Mtawaa Sahb1i; Bouenba M. Amin1; Toulgui Emna1; Herchi Wafa 2; Ouannes Walid1; Frigui Sinen1; Jemni Sonia1; Khachnaoui Faycel1

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#### Introduction

The purpose of our work, is to determine the relationship between weight and low back pain juveniles.

## **Materials & Methods**

This is a descriptive cross-sectional study of 444 students, 201 boys and 243 girls, with a mean age of 14.95 years. The assessment includes an interrogation, an anthropometric evaluation, the examination of the spine, the extensibility of the pelvic muscles and the endurance of the muscles of the spine and quadriceps.\r\nThe weight profile was determined on corpulence curves of French references, on which were added the 2 curves of international obesity task force \"IOTF 25 and 30\".\r\n

## Results

The prevalence was 22.3% CI (95% confidence interval): [18.2 - 26.2]. This prevalence increases with age with a clear predominance of women. The mean age of onset of symptomatology was 13.45 years.\r\nThe prevalence of low back pain in overweight or obese children was 38.7% and 19.63% in the rest of the children. The difference is significant. Overweight students are 2.58 times more likely to develop low back pain.\r\n

#### **Discussion**

## Conclusion

Common low back pain in children is common but still unknown which obesity is a risk factor. The knowledge of these risk factors makes it possible to take them into account in the management and prevention of low back pain.

## References

spine examination, statics

## Abstract: 182 - Date: 2019-06-30 10:08:49am

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## **Topic of Summary**

Pain management in PRM

## **Title of Summary**

DIFFERENCES IN FUNCTIONALITY BETWEEN PATIENTS WITH LOW BACK PAIN, WIDESPREAD PAIN. AND FIBROMYALGIA

## **Keywords**

#### **Authors**

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#### Introduction

It is well known that chronic pain impairs functionality. The purpose of this study was to investigate whether there is a difference in functionality level between patients with chronic low back pain, widespread pain, and fibromyalgia.

## **Materials & Methods**

This cross-sectional study included 127 patients (average age  $53,39\pm15,26$  years, 84 women (66,1%)) who were divided in three groups: group 1, with low back pain and sciatica (n=59, 46,5%); group 2, with widespread pain (n=32, 25,2%%); group 3, with fibromyalgia (n=36, 28,3%). Subjects filled out the battery of questionnaires: average pain intensity in the last four weeks on the Numerical Rating Scale (NRS), the Central Sensitization Inventory (CSI), the Fear-avoidance Components Scale (FACS). The functionality of the patients was estimated by the Oswestry disability index (ODI).

#### Results

Pain intensity on NRS was significantly higher in groups 2 and 3(5,95 vs 6,78 vs 6,94, êž³2=8,829, p=0,012). The similar findings were found for CSI score (33,44 vs 40,19 vs 50,53, êž³2=31,874, p<0,001). On the other hand, FACS score (60,53 vs 60,16 vs 61,75, êž³2=0,093, p<0,955) and ODI (38,31 vs 36,03 vs 41,61, êž³2=1,457p=0,483) did not differ significantly among groups.

## **Discussion**

## Conclusion

Although patients who suffer from widespread pain and fibromyalgia had significantly higher pain intensity and CSI scores compared to patients with low back pain and sciatica, they did not perceive lower functionality or higher fear avoidance in the tested sample. It seems that pain intensity does not necessarily compromise functionality in patients with chronic pain.

## Abstract: 184 - Date: 2019-06-30 11:05:33am

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## **Topic of Summary**

Pain management in PRM

## **Title of Summary**

DIFFERENCES IN PERCEIVED SOCIAL SUPPORT AMONG PATIENTS WITH CHRONIC PAIN AND HEALTHY CONTROLS

## **Keywords**

#### **Authors**

Josip Ivacic; Ksenija Boskovic; Snezana Tomasevic-Todorovic; Milica Jeremic-Knezevic; Aleksandar Knezevic

## **Affiliations**

General Hospital Senta, Serbia; Faculty of Medicine - University of Novi Sad, Serbia, Medical Rehabilitation Clinic - Clinical Centre of Vojvodina, Serbia; Faculty of Medicine - University of Novi Sad, Serbia, Medical Rehabilitation Clinic - Clinical Centre of Vojvodina, Serbia; Faculty of Medicine - University of Novi Sad, Serbia, Medical Rehabilitation Clinic - Clinical Centre of Vojvodina, Serbia; Faculty of Medicine - University of Novi Sad, Serbia; Faculty of Medicine - University of Novi Sad, Serbia, Medical Rehabilitation Clinic - Clinical Centre of Vojvodina, Serbia;

## Introduction

Social factors might play a role in development of chronic pain, however papers on this topic are scarce and the association is vague. The purpose of this study was to investigate differences in perceived social support between patients with chronic low back pain and healthy controls.

## **Materials & Methods**

This cross-sectional study included 100 patients (healthy controls – Group I: n=41 (average age 48,68±11,53 years, 28 women (68,3%)) and chronic low back pain patients – Group II: (average age 49,56±14,46 years, 33 women (55,9%)), who filled out the Multidimensional Scale of Perceived Social Support (MSPSS) wich encompasses three dimensions: significant other (SO) support, family (FA) support, and frient (FR) support.

## Results

There was no differences in age and gender between groups (t=-0,323, p=0,747;  $\hat{e}\check{z}^3$ 2=1,554, p=0,297). Perceived FA support (6,67±0,56 vs 6,17±1,26, t=2,715, p=0,008)and total MSPSS scores (6,41±0,52 vs 6,06±1,09, t=2,136, p=0,035)were significantly higher in group I, while perceived SO (6,37±1,01 vs 6,15±1,36, t=0,855, p=0,395), FR (6,18±0,80 vs 5,85±1,16, t=1,620, p=0,094) support, were not different among groups.

## Discussion

## Conclusion

Perceived family social support played an important role in differentiating subjects with chronic low back pain and healthy controls in our sample. It seems that this dimension of social support is more impaired than other in chronic low back pain patients. Further research on a larger sample, with other types of chronic pain is needed.

## Abstract: 186 - Date: 2019-06-30 11:34:56am

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## **Topic of Summary**

PRM in orthopaedics and musculoskeletal disorders

## **Title of Summary**

EVALUATION OF THE MEDIUM-TERM EFFECTIVENESS OF INTRA-ARTICULAR ULTRASOUND-GUIDED VISCOSUPPLEMENTATION WITH HYALURONIC ACID (iHA) COMBINED WITH INTRA-ARTICULAR PULSED RADIOFREQUENCY (iPRF) IN PATIENTS WITH CHRONIC HIP OSTEOARTHRITIS

## **Keywords**

intra-articular pulsed radiofrequency, intra-articular ultrasound guided viscosupplementation with hyaluronic acid, chronic hip osteoarthritis

## **Authors**

Isabel Carnicero Duque ; Alejandro Trujillo Sosa ; Carmen María Pérez Aguiar ; Sarai Santiago Hernández

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## Introduction

The aim of this study is to compare the efficacy and safety of intra-articular ultrasound guided viscosupplementation with hyaluronic acid (iAH) versus iAH combined with intra-articular pulsed radiofrequency (iHA + iPRF) to reduce levels of pain, stiffness and disability in patients with chronic hip osteoarthritis.

## Materials & Methods

Our prospective randomized 6-month follow-up case and control trial included 20 patients who received iHA and 20 patients who underwent iHA plus iPRF 50-60 V for 10 minutes. Inclusion criteria: Nontraumatic mechanical hip joint pain for more than 6 months, Kellgren II-III radiological degrees. Exclusion criteria: neurological or rheumatic disease, intellectual deficit, fractures or surgical interventions previous in the affected extremity. The primary end points was the visual analog scale and the WOMAC Pain, Rigidity and Disability Questionnaire . All outcome assessments were performed at baseline and at 6 months.

## Results

Pain relief and functional improvement were observed in both groups (p <0.03). However stiffness improvement was observed only in the control group. There were no significant differences between the two groups.

## Discussion

## Conclusion

Adding iPRF to the iHA infiltration technique does not seem to provide greater improvement in pain, stiffness or functional deficit in patients with symptomatic chronic hip osteoarthritis in the medium term . A higher number of patients in future HA studies would serve to clarify this point.

### References

## Abstract: 187 - Date: 2019-06-30 11:35:23am

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## **Topic of Summary**

Pain management in PRM

## **Title of Summary**

Chronic pain after total knee arthroplasty: Prevalence, predictors and consequences

## **Keywords**

Chronic pain; Total Knee Arthroplasty; Surgery; Rehabilitation

## **Authors**

André Canelas (1); Paulo Araújo (1); Raquel Fonseca (2); Bernardo Ferreira (1); Simão Serrano (1); Lisete Luís (1); Filipa Januário (1); Mafalda Bártolo (1)

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#### Introduction

Evaluate the prevalence of chronic pain 3-months and 1-year after total knee arthroplasty (TKA), as well as its predictors and consequences.

#### Materials & Methods

Longitudinal prospective study, including patients with moderate-to-severe osteoarthritis submitted to TKA between 10/2016 and 10/2017. All patients performed a rehabilitation protocol with 15 sessions of physiotherapy. A clinical evaluation, therapeutically measures adopted, numerical pain rating scale (NPRS) and Short Form Health Survey (SF-36) were assessed before and 2-days, 3-months and 1-year after the surgery. Several sociodemographic variables and the Hospital Anxiety and Depression Scale (HADS) were evaluated before the surgery.

## Results

72 patients included, 61% female, mean age 71 years (ï,±6.4). Prevalence of chronic pain (NPRSï,³4 with ï,³3-months) was 33% at 3-months and 30% at 1-year. 19% had been followed at Pain Unit. 2-days after surgery 41% had a NPRSï,³4 and it was associated with chronic pain (p<0.001). Higher NPRS before the surgery predicted chronic pain at 1-year

(p=0.001). Initial lower SF-36 subscale scores were associated with worst SF-36 scores at 1-year (p<0.001). The female sex (p<0.001) and initial higher anxiety levels (p=0.03) predicted higher NPRS at 3-months and 1-year. Age, body mass index, depression and chronic venous insufficiency were not associated with chronic pain. Chronic pain was associated with lower scores at all SF-36 subscales at 1-year (p<0.001).

## Discussion

## Conclusion

Chronic pain is a frequent complication of TKA with great impairment at quality of life. A more carefully evaluation and treatment of acute pain is necessary in order to avoid its chronification, particularly in these prone patients.

## Abstract: 188 - Date: 2019-06-30 11:41:46am

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## **Topic of Summary**

PRM in orthopaedics and musculoskeletal disorders

## **Title of Summary**

The real results of total knee arthroplasty in moderate-to-severe osteoarthritis: a 1-year longitudinal prospective study

## **Keywords**

Total Knee Arthroplasty; Osteoarthritis; Function; Surgery; Rehabilitation;

#### **Authors**

André Canelas; Paulo Araújo; Bernardo Ferreira; Simão Serrano; Lisete Luís; Filipa Januário; Mafalda Bártolo

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## Introduction

Evaluate the long-term outcome and prognostic factors in total knee arthroplasty (TKA) for moderate-to-severe osteoarthritis concerning symptoms, functionality and quality of life (QoL).

## **Materials & Methods**

Longitudinal prospective study, including patients with moderate-to-severe osteoarthritis submitted to TKA between 10/2016 and 10/2017. All patients performed a rehabilitation protocol with 15 sessions of physiotherapy. The numerical pain rating scale (NPRS), Knee injury and Osteoarthritis Outcome Score (KOOS4) and Short Form Health Survey (SF-36) were evaluated before surgery, 3-months and 1-year after the surgery. Several socio-demographic variables and the Hospital Anxiety and Depression Scale (HADS) were evaluated before the surgery. The walking ability, the satisfaction with the intervention (Likert scale) and complications were determined 3-months and 1-year after procedure.

## Results

72 patients included, 61% female, mean age 71 years (ï,±6.4). There was a 3-month and 1-year significant improvement in NPRS (p<0.001), in all KOOS4 subscales (p<0.001) and in SF-36 domains: physical functioning; role limitations due to physical health; social functioning, pain (all p<0.001); emotional well-being and energy/fatigue (p<0.05). 20% patients were not satisfied with the results and 16% would not accept the same intervention at 1-year follow-up. Prevalence of chronic pain (NPRSï,³4) was 33% and 30% at 3-months and 1-year. 3% were submitted to a new surgery. 84% had walking capacity without aids at 1-year. The lowest satisfaction rates were in patients with chronic pain (p<0.001).

## Discussion

## Conclusion

TKA followed by a specific rehabilitation program significantly improves symptoms, functionality and QoL. Chronic pain is a major concern and can explain the low satisfaction rates.

## Abstract: 189 - Date: 2019-06-30 11:58:21am

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## **Topic of Summary**

Neurorehabilitation, spasticity

## **Title of Summary**

Association between Metabolic Syndrome and Barthel Index after Acute Stroke

## **Keywords**

metabolic syndrome, MetS, stroke, Barthel index

### **Authors**

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#### Introduction

Metabolic syndrome is a collection of metabolic disorders: abdominal obesity, hyperglycemia, dyslipidemia and hypertension type 2 DM that increases the risk of the cardiovascular diseases. The aim of the study was to determine the effects of the MetS on the short-term prognosis of patients with acute ischaemic stroke.

#### **Materials & Methods**

This retrospective study enrolled 270 patients after acute ischaemic stroke hospitalized at Clinic for Physical Medicine and Rehabilitation, Clinical Center University of Sarajevo in period of one-year. Patients were divided in two groups: with MetS (n=170) and non-MetS (n=100). Neuromotor functions and functional independence were assessed with Barthel index (BI) at start and discharge.

## Results

Out of 170 patients in MetS group, 94/170 were females and 76/170 were males. Out of 100 patients in non MetS group, 54/100 were females and 46/100 were males. The mean of age in MetS group was  $69.1\pm5.6$  years, in non-MetS group was  $69.8\pm11.1$  years (p>0.05). In MetS group, the most common risk factors were:hypertension,smoking history ,dislipidaemia , obesitas,and T2 DM - In the MetS group, the median of BI at discharge was significantly higher, compared with BI at start . In the non- MetS group, the median of BI at discharge was significantly higher compared with BI at start. There was not significantly difference between these two groups (z=-0.550, p>0.05).

## Discussion

#### Conclusion

There are no significant difference in progress between MetS and Barthel index in patients after acute ischaemic stroke.

## References

It has been shown that a good rehabilitation program is required after a stroke without entering into the input factors

## Abstract: 192 - Date: 2019-06-30 12:28:47pm

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### **Topic of Summary**

PRM in geriatric conditions

## **Title of Summary**

Rehabilitation in hospital-associated deconditioning in older adults

## **Keywords**

deconditioning, functional decline, rehabilitation

### **Authors**

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## Introduction

To define the benefits of rehabilitation treatment in geriatric patients with hospital-associated deconditioning and describe the factors that can influence functional outcomes.

## **Materials & Methods**

Observational and descriptive study on elderly patients with hospital-associated deconditioning, assessed for one year at the Rehabilitation Department in a geriatric hospital.\r\n92 patients over 70 years of age were collected. Medical and social variables, Barthel index and mobility at admission and at discharge, rehabilitation treatment carried out and destination at hospitalary discharge were analyzed. Data were analyzed using the SPSS 19 statistical package.\r\n

## Results

The average age was 83 + 5 years. 40% received the treatment in the Mid- term Stay Unit. The in- patient period lasted 33 + 24 days and the rehabilitation treatment period lasted 16 + 19 days. 21% of them developed confusional syndrome during in- patient period. \r\nThe confusional syndrome is fact is related to worse Barthel score at discharge (p=0.028). 65% of patients admitted to Mild-term Stay Unit are discharged using a walker for gait. Only 1% of them do not get gait ability, compared to patients not admitted in Mild-term Stay Unit, which are 22% those who do not get gait (p=0.044). 61% of patients return home at discharge.\r\n

#### Discussion

## Conclusion

Age does not influence outcomes after rehabilitation treatment. Performing the treatment at Mild-term Stay Unit allows to obtain better functionality at discharge. Confusion syndrome during admission is associated with worse outcomes at discharge.

## Abstract: 194 - Date: 2019-06-30 12:50:46pm

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## **Topic of Summary**

PRM in paediatric problems

## **Title of Summary**

Effects of itinerant occupational therapy service in after school day service for children with disabilities

#### Keywords

after school day service, developmental disorder

#### **Authors**

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## Introduction

Saitama prefectural association of occupational therapists is conducting an itinerant occupational therapy service project intended for after school day service for children with disabilities. The first author joined this project and visited to one after school day service 13 times from August 2017 to March 2018. Day service staff was provided indirect support by occupational therapist. There is a few evidence for the effects of itinerant service. The purpose of this study was to retrospectively evaluate the effects of itinerant occupational therapy.

## **Materials & Methods**

Qualitative inductive analyses were performed on clinical records of the first author. The first and second author divided the data into categories. The day service administrator checked the strengths and difficulties questionnaire (SDQ) of seven children at the fifth and 13th session. We conducted Wilcoxon signed-rank test for comparison.

## Results

The occupational therapist gave the staff advices about "sensory motor condition", "mental condition", "social skill education", "human environment" and "material environment". There were no significant differences in SDQ total and subscale.

## **Discussion**

## Conclusion

The findings of this study suggest that occupational therapist gave various advice to the staff. We can't clarify the effects

## References

## Abstract: 199 - Date: 2019-06-30 15:15:06pm

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## **Topic of Summary**

PRM in paediatric problems

## **Title of Summary**

BODY POSTURE ANALYSIS OF PRESCHOOL CHILDREN IN SABAC IN 2013 AND 2018 comparison and general evaluation

#### **Keywords**

posture, analysis, preschool, Sabac

## **Authors**

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## Introduction

Evaluating the state of body posture in preschool children, comparing prevalence in two groups from 2013 and 2018. Study the significance of any differences, define the most common disorders

#### **Materials & Methods**

The intersectional approach was used; results of clinical examinations of posture were reviewed according to ten categories. There were 223 participants in 2013 and 360 in 2018; 583 altoghether. The methods used were descriptive statistics and the Chi square and Fisher test. Significant difference was calculated at p<0.05.

## Results

The proportion of children from 2013 with the following disorders is higher: rib cage deformity 16.59%:3.33%  $\chi^2$ = 29.75%; scapular fixation 56.5%:24.4%,  $\chi^2$ = 43.26; kyphosis 29.60%:13.3%, $\chi^2$ = 23.15;lumbar hyperlordosis: 19.28%: 14.72%, $\chi^2$ = 30.06;foot deformity:45.29%:20.83%,  $\chi^2$ = 39.93 (df = 1, p = 0.00 for all), scoliosis p=0,00.\r\nln 2018 57.78% children had completely normal test results and 39.46% of children in 2013  $\chi^2$ = 17.76, df = 1, p = 0.00. No statistically significant difference could be established for the other categories. The whole percentage of real scoliosis was low, the Adams forward bend positive results were found in 0.69% and general scoliotic posture in 1.72%. \r\n

#### Discussion

## Conclusion

Significant statistical differences in the two groups of children were found in 6 out of the 10 posture categories; all in favour of the group from 2018 in terms of better test results. The whole number of structural deformities is very low, while almost the half of all participants had completely normal posture test results. Further monitoring and treatment were prescribed according to the test result.

#### References

## Abstract: 201 - Date: 2019-06-30 15:15:45pm

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## **Topic of Summary**

PRM in orthopaedics and musculoskeletal disorders

#### Title of Summary

Is Vitamin C useful for prevention in the appearance of complex regional pain syndrome

## **Keywords**

Vitamine C, complex regional pain syndrome, wrist fracture, ankle fracture

## **Authors**

Trujillo Sosa, Alejandro (1); Santiago Hernandez, Sarai (1); Carnicero Duque, Isabel (1); Perez Aguiar, Carmen Maria (1)

## **Affiliations**

(1) Physical Medicine & Rehabilitation Dr; Hospital Universitario Nuestra Señora de La Candelaria, Spain.

## Introduction

To assess the efficacy of the use of vitamin C as a preventive method in the appearance of complex regional pain syndrome (CRPS)

### **Materials & Methods**

Prospective observational randomized study in recruitment period from January 2018 to December 2018 collecting patients diagnosed with fracture of ankle and wrist treated conservatively, which were divided randomly into four groups according to the kind of fracture and the contribution or not of vitamin C: (1000mg / day for 50 days). Periodic reviews were made at the first, third and sixth months, with bone scintigraphy being requested in the latter.

For the statistical study we used SPSS 20.0 with descriptive analysis for each variable and t-student for intergroup variables or intragroups with level of significance p <0.05.

## Results

We included 115 patients with an average age of 64.45 and distribution of fractures (81 wrists and 34 ankles). We found 11 cases of CRPS stage I in patients who did not take vitamin C (10 wrists and 1 ankle) and only 1 case in those who took it (1 wrist) demonstrated both clinically and gammagraphically, these data being statistically significant (p < 0.001) in wrist fractures and not significant in the ankle (p = 0.01).

## Discussion

## Conclusion

The use of vitamin C as a preventive method in the formation of CRPS is useful in patients with wrist fractures, not finding significant evidence in other kinds of fractures, although studies with a greater number of patients should be done to validate these results

## Abstract: 203 - Date: 2019-06-30 15:21:16pm

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## **Topic of Summary**

Neurorehabilitation, spasticity

## **Title of Summary**

Disorder of Attention after Traumatic Brain Injury in Pediatric Population

## **Keywords**

### **Authors**

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#### Introduction

Traumatic brain injury (TBI) is a heterogeneous disorder with frequently diffuse axonal injury. A variety of cognitive dysfunctions are frequently found, such as disorders of attention. Nonetheless, problems are found regarding definition, conceptualization, evaluation and treatment approach of attention disorders. These issues are even more prominent in the pediatric age, regarding the specificities of this population.

## **Materials & Methods**

We present a retrospective descriptive study where we revised all traumatic brain injured patients who were admitted in the pediatric rehabilitation unit of a specialized rehabilitation center between 2015 and 2019.

#### Results

Of the 24 hospitalized patients, in 16 of them it was possible to perform neuropsychological evaluation. Attention disorder was suggested in all of them. Besides the changes in attention, the results of the evaluation were also suggestive of executive and processing speed dysfunction as common cognitive deficits. All these patients were treated with methylphenidate and they were integrated into a cognitive stimulation program using computerized software (Rehacom ® and Cogniplus ®). Globally, all patients had a positive evolution. This was objectified by the progress in the software program and in neuropsychologic formal re-evaluation.

#### Discussion

## Conclusion

With this study, the authors intend to describe the protocol of evaluation, intervention and reevaluation, showing the reality of our pediatric inpatient rehabilitation unit.

# Abstract: 208 - Date: 2019-06-30 15:36:03pm

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## **Topic of Summary**

Pain management in PRM

## **Title of Summary**

Pain management at the end of life: experience of a Tunisian intensive care unit.

## Keywords

Pain-end of life

#### **Authors**

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## **Affiliations**

Medical Intensive Care Unit (MICU) of Sahloul University Hospital of Sousse, Tunisia.

### Introduction

The objective of our the present study was to report our local experience in end of life care, and highlight the importance of pain management in a global approach of the terminally ill patients.

### **Materials & Methods**

We conducted a monocentric retrospective study, including 12 patients who had been hospitalized in the Medical Intensive Care Unit (MICU) of a Tunisian university hospital. We included patients who required palliative care and for whom a do not resuscitate order (DNR) was issued upon admission or within 48 hours of hospitalization.

#### Results

Average age was 73 ± 13 years. Palliative care was sustained until death by optimizing the respiratory state and systemic perfusion pressure.\r\nRegarding pain management, in addition to the postural treatment that contributed to the comfort of the patient, medical analgesic treatment was essential for 7 patients; Morphine was prescribed in 3 patients, paracetamol (Perfalgan®) was prescribed intravenously for 2 patients, and orally for 1 patient. Nefopam (Acupan®) was prescribed to 1 patient.\r\nBody hygiene, prevention of bed sores, deep venous thrombosis, and gastrointestinal bleeding were ensured for all patients. Spiritual needs were satisfied. \r\n

## **Discussion**

## Conclusion

Pain relief was a major concern during end of life care, and was ensured for all patients with efficacy. \r\nThe goal of palliative care is to relieve physical pain and other symptoms, but also to take into account psychological, social and spiritual suffering

# Abstract: 209 - Date: 2019-06-30 16:58:06pm

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## **Topic of Summary**

Neurorehabilitation, spasticity

## **Title of Summary**

Predicting functional recovery after ischemic stroke in adults

## **Keywords**

functional recovery; ischemic stroke; prognosis

#### **Authors**

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#### Introduction

In the twelve hours to seven days after stroke, many patients experience moderate but steady neurologic improvements(1). Our aim is to review the evidence of prediction of functional recovery after stroke.

#### **Materials & Methods**

We searched PubMed, Medline and Cochrane Library for articles with the key words "stroke", "prognosis", "functional recovery" or respective MESH terms.

#### Results

Early active finger extension, grasp release and shoulder movement are associated with a favorable recovery at six months(2,3,4,5). First voluntary movements appear between 6-33 days in hemiplegic patients(6), with a peak function recovery within three and nine weeks by 80% and 95% of patients, respectively(7). Patients who maintain sitting balance for 30 seconds and perform muscle contraction in the paretic leg within the first 72 hours have a 98% probability for independent ambulation at six months(8). Maximal language recovery of mild, moderate and severe aphasia can occur in 2, 6 and 10 weeks, respectively(9). Dysphagia improves over time(10), although nearly 6% of patients may need feeding tubes(11). Of these, â..." removes it before discharge and almost all were discontinued by one year. Sensory impairment is common(12) but currently there are no reliable predictors of recovery. Limited data suggests full recovery from visuospatial neglect within 3 months(13,14) and that 17% of those with complete homonymous hemianopia (HH) and 72% with partial HH had full recovery at 1 month(15).

## Discussion

## Conclusion

The time course and degree of improvement vary for specific deficits. Knowing which factors influence the prognosis is crucial for its prediction and for defining the best approach to our patients.

# Abstract: 210 - Date: 2019-06-30 17:10:08pm

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## **Topic of Summary**

PRM in orthopaedics and musculoskeletal disorders

## **Title of Summary**

Does the Montenegrian healing mud is a powerful tool in the balneological treatment of inflammatory rheumathoid diseases

## **Keywords**

healing mud, balneology, rheumathoid diseases

#### **Authors**

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## Introduction

was to investigate the sustained effect of healing mud and hydro-aroma therapy on hematological parameters in a sample of patients suffering from inflammatory diseases.

#### **Materials & Methods**

The study included 22 Norwegian patients with confirmed diagnosis of inflammatory rheumatoid diseases recruited by the Section for Climate Therapy, Oslo University Hospital, Norway and send to 4 weeks physical treatment and rehabilitation to the Institute "Dr Simo Milosevic"Igalo, Montenegro in August and September 2018. They were divided into 2 groups: (1) treated with biological drugs (BD; n=10) and (2) treated with other DMDs (non-BD; n=12). All the patients received standardized protocol based on natural healing mud and hydro-aroma therapy (mineral Whirlpool bath enriched with essential oils of Levander, Orange and Lemon). All patients had a clinical examination and sampled blood before and after finishing treatment.

## Results

Our results indicated that applied protocol significantly increased mean platelet count (PLTs) (p<0.031) in the whole sample of patients. Further analyses point that BL patients had significantly decreased mean monocytes (Mo) count (p<0.036) and non-BL patients had significantly reduced mean white blood count (WBC) (p<0.029).

## Discussion

## Conclusion

Obtained results indicate existance of a significant anti.inflammatory potential of Montenegrian healing mud in the treatment of chronic inflammation as a powerfull toll in balneology.

#### References

# Abstract: 213 - Date: 2019-06-30 17:46:21pm

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## **Topic of Summary**

Cardiovascular and pulmonary prevention and rehabilitation

## **Title of Summary**

Cardiac Rehabilitation in Patients with EXCOR Ventricular Assist Device in a Central Hospital in Spain

## **Keywords**

Cardiac Rehabilitation, Ventricular Assist Devices

#### **Authors**

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## Introduction

Ventricular assist device(VAD) has rapidly emerged as a durable and safe therapy for end-stage heart failure patients. Though originally conceived for bridge-to-transplant indication, significant advancements in medical management and newer generation devices have improved patient outcomes, leading to increasing use as destination therapy. The burden of adverse events remains significant and defines the most pressing issue in the current state of VAD therapy. Cardiac Rehabilitation (CRHB) seems to have an important role in the management of this patients, nevertheless these programs are being implemented in few places around the world. In our hospital since 2015 the CRHB team, in close cooperation with all health professionals involved in the management of this patients, has been implementing a rehabilitation program based in the current evidence. We describe this program from implantation, care in the ICU. extraction fase and ending of the process for which it was first implanted.

## **Materials & Methods**

ICU post-surgery protocol: avoid musculoskeletal and respiratory complications by performing a passive and active assistance kinesitherapy and respiratory physiotherapy. Third day post-surgery: transfers and bipedestation. Wing: functional independence, ambulation, stationary bicycle (50-60 rpm), treadmill (2km/h) with MHR= RHR+30 bpm. Ambulatory: improve exercise tolerance, increase exertion capacity and prevent complications adding aerobic exercise and muscle strengthening.

## **Results**

There has been a change of scenario from bedridden cachectic patients in the ICU awaiting heart transplantation, and post-ICU syndrome, to active patients with EXCOR.

## Discussion

## Conclusion

They're able to perform CRHB programs, which decreases complications and hospital readmissions, allowing them to arrive to transplantation in the best possible physical condition.

#### References

Nothing to declare.

## Abstract: 214 - Date: 2019-06-30 17:49:38pm

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## **Topic of Summary**

PRM in paediatric problems

## **Title of Summary**

Cardiac Rehabilitation in Pediatric Patients with Congenital Heart Defects

## **Keywords**

Pediatric Cardiac Rehabilitation, Congenital Heart Defects

### **Authors**

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#### Introduction

Congenital heart defects (CHD) are defined as structural abnormalities of the heart and/or large intrathoracic vessels and present with repercussion on cardiovascular system functioning. These are the most common malformations, with a worldwide prevalence of 2.1 to 12.3 cases per 1000 newborns. Improved surgical techniques and medical treatment increased the number of patients surviving to adulthood. With this work we intend to carry out a literature review regarding cardiac rehabilitation programs (CRP) aimed for children with CHD and its results.

## **Materials & Methods**

A literature review between the years of 2000 and 2018 was carried out, using PubMed/MEDLINE and ClinicalKey - FirstConsult, and the MESH words: \"cadiac rehabilitation\", \"pediatric\" and \"congenital heart defects\".

#### Results

CRP for children with CHD should intervene in cardiovascular risk factors, psychological, nutritional and social variables (involving the child and the caregivers) and a exercise training program that has to take into account the age of the child, specificities of each CHD, possible surgical corrections and medical treatment. The majority of children with CHD end up stratified as medium-high risk.

## **Discussion**

#### Conclusion

There are very few studies in this population, but most show that CRP increase exercise tolerance, survival and quality of life thanks to adaptative changes at rest, increased cardiopulmonary capacity and ventilatory efficiency. There aren't many pediatric cardiac rehabilitation centers in the world, and most base their work on CRP of the adult

population.\r\nlt\'s necessary to study specific rehabilitation programs for this population increasing research in this field, so that we can provide them the best possible health care.

#### References

Nothing to declare.

# Abstract: 217 - Date: 2019-06-30 18:10:02pm

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## **Topic of Summary**

Pain management in PRM

## **Title of Summary**

Piriformis syndrome: when conservative treatment fails

#### **Keywords**

Piriformis; Pain; Ultrasound; Botulinum toxin

#### **Authors**

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## Introduction

The piriformis syndrome (PS) is a poorly characterised painful condition attributed to dysfunction of piriformis muscle, causing buttock pain of somatic and neuropathic origin. In refractory cases, validated alternative approaches to conservative treatment are lacking.\r\nThe aim of this work is to highlight a possible role of the interventional ultrasound-guided techniques integrated in a multimodal therapy in the refractory PS.

## **Materials & Methods**

36-year-old female diagnosed with PS, following a 2-year history of right buttock pain. Scaling of multimodal oral pharmacological treatment was unsatisfactory. High intensity pain scores and disability were reported in both Numeric Pain Rating Scale (NPRS) and Brief Pain Inventory (BPI) consecutive assessments.

## Results

An ultrasound-guided intervention test was carried out with 2ml lidocaine 2%, 2ml ropivacaine 0.2% and 0.5 ml methylprednisolone (40mg/ml). Enrolment in a complementary rehabilitation program was assured. Despite total resolution of pain, it resumed after 24 hours. \r\nA similar trial conducted with 100U of incobotulinum toxin A (BoNT-A) resulted in a prolonged reduction of pain and improvement at 4-week pain inventory scores, namely pain intensity

(9.25 to 6.0), interference in general activity (8.67 to 7.0), affective dimension (6.0 to 5.0) and global pain interference (7.71 to 6.14).

## **Discussion**

#### Conclusion

PS is a debilitating chronic pain condition with physical, pharmacological and surgical treatment methodologies. BoNT-A ultrasound-guided injection technique can be a valuable alternative as part of a multimodal approach in PS. This case suggests superior results over steroid injections in respect to both intensity and duration of pain relief.

#### References

## Abstract: 218 - Date: 2019-06-30 19:12:35pm

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## **Topic of Summary**

PRM in paediatric problems

## **Title of Summary**

Spine deformities and mineral bone density in children with cerebral palsy

## **Keywords**

cerebral palsy, children, mineral bone density, spinal deformities

## **Authors**

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## Introduction

In children with cerebral palsy (CP) spine deformities are frequent. Mobility and muscular load are reduced, which is the main reason for reduced bone mass. \r\nAim of this paper was to determine the ratio of spine deformities and mineral bone density in children with CP.\r\n

## **Materials & Methods**

The sample included 41 patients, aged 5-18, who were followed at Institute for Children and Youth Health Care of Vojvodina in Novi Sad during one year. DXA examination was

performed at Special Hospital for Rheumatic Diseases, Novi Sad. The bone mineral density (BMD as well as the BMD Z-score) were determined for the lumbar region of the spine.

#### Results

The average age of the participant was just under 11 years. The most common types of cerebral palsy were quadriplegia (58.5%) and diplegia (26.8%). Most patients had V level of functionality by GMFCS scale (43.9%), then IV level (26.8%) and I level (17.1%). Deformities of the spine were present in 70.7% of the patients. There were no statistically significant differences in BMD Z-score of the lumbar spine compared to the presence of spine deformities. BMD Z-score of the lumbar spine was statistically significantly lower at V compared to I level by GMFCS scale (p < 0.01).

#### Discussion

## Conclusion

Children with spine deformities did not have significant decrease BMD Z-score of the lumbar spine related to the presence of deformities of the spine. There was significant difference between I and V level by GMFCS.

#### References

Study supported by Grant No III41012, Ministry of education, science and technological development of Serbia.

## Abstract: 224 - Date: 2019-06-30 20:21:00pm

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## **Topic of Summary**

PRM in orthopaedics and musculoskeletal disorders

#### Title of Summary

A one-year experience in the rehabilitation of unucondyal prostheses on the knee

## Keywords

unicondylar knee arthroplasty, early rehabilitation, UKA

## **Authors**

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## Introduction

Osteonecrosis or degenerative osteoarthritis is common disease of knee with an increase in human life. Replacement of only one compartment of the knee with unicondylar knee prosthesis replacement is applied after strict patient selection, in order to improve the quality of life. Partially replacing the damaged knee sections with unicondylar knee arthroplasty UKA is a minimal invasive surgery, replacing only the damaged part of the knee.

#### **Materials & Methods**

A retrospective study of patients operated at the orthopedics and traumatology department at in the current year.

#### Results

The study included a total of 26 patients that experienced preoperative evaluation and preparation for surgery with a minimally invasive Knee Medial Parapatellar Approach.\r\nFor the evaluation of pain quality, a VAS (visual analogue scale) scale was used postoperatively, data from the surgical protocol and HIS of the orthopedics department for hospital days spent at our institution, and different scales for the quality and speed of recovery and inclusion of patients in daily activities.

## Discussion

#### Conclusion

All 26 examinees with conducted early rehabilitation were dismissed on the third day of the intervention with early mobilization, verticalisation. The benefits are faster recovery and decreased postoperative pain, lower surgical incision, lower blood loss, preservation of the ligament knee apparatus, better volume of the knee movement, subjective feeling as a natural knee.\r\nCost of hospital days has decreased, shorter hospital treatment, post-operative complications. And with this, it is also expected to reduce the need for revision of prostheses.

## References

## Abstract: 225 - Date: 2019-06-30 20:21:10pm

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## **Topic of Summary**

PRM in geriatric conditions

## **Title of Summary**

Sarcopenia among hospitalized older adults: epidemiology and risk factors identification

### Keywords

sarcopenia, handgrip strength, muscle mass, gait speed, muscle insufficiency, EWGSOP, EWGSOP2

#### **Authors**

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#### Introduction

Define sarcopenia prevalence according to European Working Group Sarcopenia Older People (EWGSOP) criteria among hospitalized Portuguese older adults and its association with nutritional and mental status, co-morbidities, polymedication and quality of life (QoL).

#### **Materials & Methods**

A cross-sectional study, approved by Ethical Committee, was conducted at an Internal Medicine unit for a 4-month period (Feb-May 2019). Patients ≥65 years were included; exclusion criteria: <65 years old, non-cooperation and decompensated diseases. Muscle strength (MS) evaluated by handgrip strength with JAMAR dynamometer; muscle quantity (MM) evaluated through appendicular skeletal muscle mass (ASM) predicted by bioelectrical impedance analysis (BIA) and body size adjusted (ASM/height2); physical performance (PP) evaluated from 4-m usual walking speed test. Mini Nutritional Assessment (MNA), minimental state and SarQoL were applied. All subjects signed informed consent. Statistic analysis performed using SPSS24.0.

#### Results

A total of 50 patients, median age of 82 years. According EWGSOP2 (2019) criteria: 50% had no sarcopenia, 32% probable, 6% confirmed and 12% severe sarcopenia. Applying EWGSOP 2010 criteria 28% had no sarcopenia, 13% pre-sarcopenia, 25% sarcopenia e 34% severe sarcopenia. Confirmed risk factors: undernutrition (OR=3). Some co-morbidities and polymedication identified as possible association. Male gender identified as possible protector factor. It wasn't possible to confirm QoL and sarcopenia association (p>0,05).

## Discussion

## Conclusion

Current criteria are more specific and less sensitive, however about 50% had some sarcopenia degree. Focus on low MS as key characteristic raises important questions: MM role and definition as muscle insufficiency. Confirmation of undernutrition as a risk factor and a potential therapeutic target. Larger samples are needed

## References

Abstract: 226 - Date: 2019-06-30 20:27:21pm

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## **Topic of Summary**

Sports injury rehabilitation

## **Title of Summary**

Isokinetic profile of strengths trunk: Moroccan experience

## **Keywords**

Isokinetic measurement, extension, flexion, trunk muscle strength

#### **Authors**

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#### Introduction

This study had a first objective of developing an isokinetic strength profile for trunk's flexors and extensors among normal subjects, through our experience.

## **Materials & Methods**

Fourteen subjects (five males and nine females) with sedentary to light physical activity levels and without low back pain were recruited. Measurements of isokinetic parameters during trunk flexion and extension were studied.\r\nSubjects performed extension and flexion contractions at 60° and 120°/sec starting at neutral position to 70° flexion. Data interpretation consisted of flexion and extension peak torques at 60°/sec and total work performed and torque ratios at 60°/sec and 120°/sec.

#### Results

Peak torque value in trunk extension, at 60°/sec angular velocity, was significantly higher in males but not in flexors muscles. Trunk total work for both flexion and extension in males was significantly higher than in females at 60°/sec and at 120°/sec. There was no difference between two groups regarding flexors to extensors ratios at any angular velocity.

#### **Discussion**

## Conclusion

it is relevant to establish a sound database in order to establish normative values, to guide the interpretation of the results of an applied isokinetic evaluation at the spine. However, the assessment of the flexor and extensor muscles of the spine requires rigor in the installation of the subject.

## Abstract: 230 - Date: 2019-06-30 20:42:41pm

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## **Topic of Summary**

Neurorehabilitation, spasticity

## **Title of Summary**

Bone fractures and stroke - are they intertwined?

## **Keywords**

stroke, bone fracture, etiology, risk

#### **Authors**

José Vilaça Costa (1); Filipa Vilabril (2); Margarida Costa (3); Inês Ferro (1); João Silva (1); António Paiva (1); Paula Amorim (1); Jorge Laíns (1)

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## Introduction

Stroke patients are at higher risk of bone fractures. Simultaneously, a cerebrovascular event occurs frequently after a hip fracture. As these two entities share common risk factors, knowing the pathogenesis linking both could help defining preventive and therapeutic strategies. The aim of this paper is to review the evidence underlying fractures and stroke.

#### **Materials & Methods**

Narrative literature review of papers published in the database Pubmed/Medline/Embase/Cochrane Library, searching MESH terms: stroke AND bone fracture AND etiology AND risk.

## Results

About 5% of stroke patients suffer a bone fracture. Muscle atrophy and the resulting immobility of hemiparetic limbs increase the risk of falling, which in the course of a bone-demineralization process (hemi-osteoporosis) results in bone fracture. The advanced age, prestroke dependency, loss of balance, neglect, perceptual and visual deficits are all correlated to fractures. Additionally, stroke leads to dementia, presenting in 50% of fall-related hip fractures. A fall occurs 14-65% during hospitalization after stroke, with persistent higher risk on later stages of the disease, mainly on transition stages. Finally, it is described that after a bone fracture, the systemic production of inflammatory cytokines enhances ischemic stroke and cognitive dysfunction.

## Discussion

## Conclusion

Fractures and stroke are intertwined as one increases the risk of the other. Epidemiological data is heterogeneous, due to lack of patients' clinical and functional standardization. However it is well described that stroke is an independent risk factor for fractures. Its prompt identification by patients and health professionals is the first step to develop prevention and therapeutic guidelines.

#### References

## Abstract: 231 - Date: 2019-06-30 20:43:53pm

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## **Topic of Summary**

PRM in orthopaedics and musculoskeletal disorders

## **Title of Summary**

Relationship between quality of life, isokinetic strength and functional performance in patients with knee osteoarthritis

## Keywords

osteoarthritis, strength, quality of life, functional

## **Authors**

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## Introduction

The aim of the study was to verify the correlations between quality of life, isokinetic knee muscles strength and functional performance in patients with knee osteoarthritis.

## **Materials & Methods**

34 patients (15 men and 19 women) with moderate knee osteoarthritis (grade 2 and 3 according to Kellgren-Lawrence classification) were included in this cross-sectional, observational study. Quality of life assessment was based on the SF-36 Questionnaire. Isokinetic quadriceps and hamstrings torque was assessed using a Gymnex Iso 1 dynamometer at the angular velocities of 60°/s and 120°/s. Functional performance was assessed using the stair-climbing test (SCT), the timed up-and-go test (TUG) and the 6-minute walk test (6MWT).

#### Results

Functional performance assessed by all the three tests was found to be significantly correlated (p<0.05) with extensor strength for both velocities. 6MWT also significantly

correlated (p<0.05) with flexor strength. Quality of life, assessed by SF-36, was significantly correlated (p<0.05) with knee extensor strength, SCT, TUG and 6MWT.

## **Discussion**

#### Conclusion

Muscle strength and functional performance have been found to be important predictors for quality of life in people with knee osteoarthritis. Therefore, they should be addressed particularly by comprehensive personalized rehabilitation programs in this population.

#### References

## Abstract: 234 - Date: 2019-06-30 21:01:58pm

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## **Topic of Summary**

Pain management in PRM

## **Title of Summary**

PHYSICAL MODALITIES IN TREATMENT OF PAIN IN PATIENTS WITH PERIPHERAL NERVE DAMAGE

## **Keywords**

pain, physical therapy, peripheral nerve damage

#### **Authors**

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Clinical Center of Vojvodina, Medical Rehabilitation Clinic; Medical Faculty in Novi Sad, University of Novi Sad

## Introduction

The aim of this study was to evaluate the efficacy of various physical modalities in eliminating pain in patients with peripheral nerve damage.

## **Materials & Methods**

Our research was involved 56 patients with peripheral nerve damage, the study group consisted of 30 patients and control group of 26 patients which were age and sex matched. Patients in the study group received different physical modality therapy, while control group subjects had the electrophoresis of benfotiamine applied. Patients were tested at the

beginning and at the end of the treatment and following tests have been used: Visual analog scale (VAS), PainDETECT test, Neuropathic Pain 4 Questions (DN4).

#### Results

In our research, we found that there were significant differences between all of the data obtained at the beginning and end of the study, both in the study and in the control group. Patients in the study group reported better effect in reducing the intensity of pain based on data acquired by Pain detect test.

## Discussion

#### Conclusion

The results show that after different physical therapy modalities, as well as after application of electrophoresis of benfotiamine, there was a significant decrease in the intensity of pain in patients with peripheral nerve damage.

## References

physical therapy is a significant part of a multimodal approach to the treatment of neuropathic pain.

## Abstract: 236 - Date: 2019-06-30 21:06:18pm

## Name

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## **Topic of Summary**

Orthotics and prosthesis in PRM

## **Title of Summary**

Clinical Outcomes of Lower Limb Amputees: PM&R as a Case Study

## **Keywords**

Amputation, Amputee, Lower Limb, Rehabilitation

## **Authors**

Susana Rosa; Ana Almeida Pereira; Mariana Castro Martins; Rui Pedro Santos; Teresa Plancha Silva

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## Introduction

To present the experience of a PMR Service in lower limb amputees patients; to evaluate the influence of amputation etiology and the prosthesis prescription and delivery process on the outcome of these patients.

#### Materials & Methods

A study of amputees of the lower limb assisted in 2017 was performed on the Amputee Consultation of a PMR Service. Epidemiological data were defined.

#### Results

207 patients were observed, 164 males and 43 females, with ages between 28 and 94 years old. Transtibial and transfemoral amputations were observed in 140 cases, amputation of the fingers and foot occurred in 58 patients. Trauma was observed in 94 cases, the vascular cause was responsible for 91 amputations. In patients less than 60 years old, trauma was the most frequent etiology; in older patients, vascular cause was the most frequent cause of amputation. 15 patients reported phantom pain and 18 phantom sensation. Only 82 amputees received the prescribed prosthesis, and the mean waiting time for delivery was 16 months.

#### Discussion

## Conclusion

The majority of the patients observed were male, mainly between 60 and 69 years old. The most frequent levels of amputation were transtibial and transfemoral. Trauma was responsible for most amputations, especially in younger patients. Phantom pain or sensation were reported by more than 20% of amputees. The mean waiting time for the acquisition of the prosthesis was long, with most patients awaiting reception. These facts may affect both the physical and mental integrity of patients, as well as the effectiveness of a rehabilitation program.

## References

## Abstract: 239 - Date: 2019-06-30 21:15:16pm

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## **Topic of Summary**

Neurorehabilitation, spasticity

## **Title of Summary**

Effect of Age on Functional Outcomes After Stroke Rehabilitation

## Keywords

Rehabilitation, Aging, Stroke, Outcome, Disability evaluation

#### **Authors**

Susana Rosa; César Magro; Diogo Ribeiro Martins; Jorge Rodrigues; Maria Fátima Carvalho; Sílvia Boaventura; Teresa Plancha Silva

#### **Affiliations**

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#### Introduction

The incidence of stroke and the demand for stroke rehabilitation services continues to increase. It is important to identify the impact of age on functional outcome of this patients.

#### **Materials & Methods**

This retrospective study includes all patients admitted to an inpatient stroke rehabilitation program for 1 year in a Portuguese rehabilitation Hospital in 2018, comparing two age groups (<65 and ≥65 years old). Functional status at admission and discharge was evaluated by means of the FIM instrument and Barthel index (BI).

#### Results

The mean age was 66 years. The <65 years old group had 30 (47.6%) patients and the  $\ge$ 65 years old group 33 (52.4%). The main cause of stroke was ischemia. The lesions were mostly located in the left hemisphere. The mean length of hospital stay was 45,6 days. FIM presented a mean of 72,7 points (<65= 74,6 and  $\ge$ 65= 71) at admission and 88,9 (<65= 90,8 and  $\ge$ 65= 87,2) at discharge. The FIM variation presented a mean of 16,2 points (both <65 and  $\ge$ 65= 16,2). BI presented averages of 49,8 and 71 points, on admission and discharge, respectively. There was no statistically significant relationship between age at the time of the accident and the variation of the FIM and BI.

## **Discussion**

#### Conclusion

There were predominance of male individuals with ≥65 years old at the date of the accident. No statistically significant relationship between age and functional outcomes suggests that there is no justification to deny patients access to rehabilitation solely because of advanced age.

# Abstract: 245 - Date: 2019-06-30 21:30:54pm

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## **Topic of Summary**

PRM in geriatric conditions

# **Title of Summary**

Management in fall prevention workshop in elderly people faller in physical rehabilitation medicine

# **Keywords**

#### **Authors**

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# Introduction

To study the interest of a multidisciplinary consultation in fall prevention workshop and the rehabilitation treatment in the prevention of falls in elderly people

# **Materials & Methods**

Retrospective study of 28 patients treated in fall prevention workshop. All patients had an initial assessment including an interview, a clinical examination and a functional assessment. These patients were treated in a fall prevention workshop at the rate of two session per week for 6 weeks. At the end of the workshop these patients had a final evaluation to judge the effectiveness of the rehabilitation

#### Results

The average age is 68 years. The antecedents include hypertension in 67% of patients, visual disturbances in 53% of cases and diabetes in 53% of patients. There is a history of falling during the last 6 months in 78% of patients. Three patients use a walking technique. The average MIF is 117/126. The average score of Tinetti is 17/22. The average timed of the get up and go Test is 15.2 seconds. After the rehabilitation treatment, we note an improvement of the test of Tinetti and timed get up and go test which passed respectively to 15,5/22 and 12,3 seconds. The difference was statistically significant. The score of the get up and go test is passed from -2 to -1.8 with a non-significant difference

#### **Discussion**

# Conclusion

It is possible to reduce the risk of falling and therefore reduce the risk of fracture. To this end, the various measures to prevent osteoporosis and falls. Hence the interest of generalizing the consultation and the fall prevention workshop to the front-line structures

# Abstract: 257 - Date: 2019-06-30 22:14:10pm

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# **Topic of Summary**

Special body function problems e.g. spasticity, urinary system, sexuality, dysphagia, speech disorders and others

# **Title of Summary**

Urinary Incontinence in Sports - When you sneeze, you lose?

# **Keywords**

# **Authors**

José Bissaia Barreto; Pedro Teixeira; Vítor Costa Pereira; Joana Silva; Sofia Toste; Inês Táboas; Catarina Aguiar Branco

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# Introduction

We aimed to review the current literature on the particularities of urinary incontinence (UI) on athletes and its optimal management.

#### **Materials & Methods**

We searched Medline database, via PubMED, using the keywords "urinary incontinence", "sports", "pelvic floor exercise" and "rehabilitation" and selecting articles from 2000 onward.

#### Results

There is a higher prevalence of UI in athletes (particularly in women) comparing with general population (3x), with high variability of incidence between sports. UI is associated with a negative impact on quality of life (QoL) and on sport performance, leading some to switch or give up sports.\r\nAlthough physical activity (PA) may benefit UI by lowering body mass index and intrabdominal pressure, intense PA can exacerbate complaints and increase the prevalence of UI. In fact, athletes have weaker pelvic floor muscles (PFM) than non-athletes as demonstrated by a lower perineal pressure and this may be due to PFM fatigue after strenuous exercise or an imbalance between intra-abdominal pressure and contraction of PFM.\r\nRegarding treatment and/or prevention, PFM strengthening increases perineal resting pressure and maximum voluntary contraction, thus improving UI severity. Despite a lack of consensus on the optimal protocol, PFM strengthening should be recommended as first line strategy.

#### Discussion

## Conclusion

UI is highly prevalent amongst women athletes. Still, many don't report their symptoms even when it negatively impacts QoL and performance. Therefore, it's important that athletes, coaches and caregivers are aware of this and seek medical counselling when needed. Likewise, physicians should actively ask for urinary complaints, provide information and adequate treatment options.

#### References

# Abstract: 259 - Date: 2019-06-30 22:15:30pm

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# **Topic of Summary**

Sports injury rehabilitation

# **Title of Summary**

ISOKINETIC PROFILE OF THE KNEE OF MOROCAN AMATEUR FOOTBALLERS

#### **Keywords**

Isokinetic, knee, footballers, amateurs

# **Authors**

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 $^{\ast}$  Department of Physical Medicine and Rehabilitation, CHU MOHAMMED VI of Marrakech  $^{\circ}$  Unit of Physical Medicine and Rehabilitation, CHR Agadir

# Introduction

To evaluate the strength of the knee flexors and extensors of amateur footballers as well as the level of strength according to the position occupied in the field

# **Materials & Methods**

Cross-sectional study including thirty-five (35) Moroccan amateur footballers occupying different positions. These players were evaluated on isokinetic dynamometer \"Cybex Norm\". The protocol used was bilateral. The isokinetic muscle strength of the quadriceps and hamstrings in the concentric mode was measured at 2 angular velocities: 60 ° / s and 180 ° / s. The parameters studied were peak force, labor and hamstring hamstring ratio (IJ / Q).

#### Results

The mean age was  $25.28 \pm 3.34$ . There was no statistically significant difference in the isokinetic strength of the stents and flexors of footballers between the dominant and non-dominant knees in the two speeds. However, the strength of the non-dominant knee extensors of the fast-moving goalies and defender was statistically higher (p <0.05) than that of the attackers and midfielder. The work of the stents of the goalkeepers and slow-moving defender was statistically superior to that of the attackers and midfielder at the dominant knee (p <0.05) as well as for the non-dominant knee (p = 0.02).

#### Discussion

#### Conclusion

Concentric isokinetic evaluation revealed independently of the anthropometric characteristics, a difference in muscular force strength according to the position occupied by Moroccan amateur footballers.

#### References

No conflit interest

# Abstract: 263 - Date: 2019-06-30 22:25:39pm

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# **Topic of Summary**

Special therapeutic methods in PRM

#### **Title of Summary**

Our protocol for the treatment of secondary upper limb lymphedema

# Keywords

Lymphedema; PMR; quality of life

#### **Authors**

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# **Affiliations**

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### Introduction

The lymphoedema of the upper limb secondary to treated breast cancer, has a considerable psycho-social impact by pain, functional discomfort and degradation of the quality of life that it generates. We conducted a study on the management of these patients in PMR. The goal was to get indolence, restore an esthetic member, reduce the psychological impact and prevent recurrence.

#### Materials & Methods

Prospective study from January 2012 to October 2016, about 62 cases.\r\n• The evaluation was based on the following criteria: EVA (pain); volumetric measurement of the upper limb; quality of life EORTC QLQ C30 version3 and EVA Satisfaction-patient.\r\n• The treatment technique: Manual lymphatic drainage, daily bandage, theapeutic education and physical exercise.\r\n• Duration of treatment: 6 to 8 weeks

#### Results

Our patients were young with an average age of 45 years, like the general population. Manual lymphatic drainage combined with specific bandage allows a significant decrease in volume (p = 0.01) as well as pain and improvement of quality of life with considerable satisfaction (50% on the EORTC QLQ scale).

#### **Discussion**

## Conclusion

Lymphoedema of the upper extremity represents a real physical and psychological handicap where the contribution of MPR is very beneficial.

### References

# Abstract: 274 - Date: 2019-07-02 23:04:00pm

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# **Topic of Summary**

PRM in paediatric problems

### **Title of Summary**

The urodynamic profile of children with myelomeningocele

# Keywords

Urodynamic profile; myelomeningocele

#### **Authors**

BOUTALJA Hasnaa; HRAR Soukaina; LMIDMANI Fatima; EL FATIMI Abdellatif

# **Affiliations**

Department of Physical Medicine and Rehabilitation

#### Introduction

Myelomeningocele is one of the leading causes of children and teenagers's disability. The aim of this study is to analyze the results of the urodynamic profile of children with myelomeningocele

## **Materials & Methods**

Retrospective, descriptive and analytical study about children and teenagers suffering from myelomeningocele and seen during the neuro-urology consult at the Department of Physical Medicine and Rehabilitation from 2017 to 2019

#### Results

The average age was  $11.9 \pm 5.8$  years (28 children) with a female predominance of 57.7%; The vesicosphincteric disorders were pollakiuria, urinary incontinence, urinary urgency and dysuria associated with constipation. The urodynamic profile was marked by detrusor sphincter dysynergia in 7.7%, significant post void residual volume in 26.9%. Bladder compliance was decreased in 61.5% with phasic and terminal detrusor overactivity in 84.7% including 38.5% that are dangerous for the upper urinary tract

# Discussion

### Conclusion

Advances in Neurosurgery and Urology have efficiently reduced mortality in newborns. Urodynamic exploration allows to prevent uronephrological complications (hypertrophic bladder, vesico-ureteric reflux, ureterohydronephrosis with chronic kidney disease) by early management of urinary disorders

#### References

# Abstract: 276 - Date: 2019-07-03 17:22:16pm

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# **Topic of Summary**

PRM in geriatric conditions

# **Title of Summary**

Orthostatic hypotension and age-related sarcopenia

# Keywords

Elderly, Orthostatic Hypotension, Sarcopenia

### **Authors**

Kudret Keskin; Selda Çiftci; Jülide Öncü; GüneÅŸ Melike DoÄŸan;, Gökhan Çetinkal; Süleyman Sezai Yıldız; Serhat Sığırcı; Kadriye Orta Kılıçkesmez MDa,d

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## Introduction

In our study, we sought to determine the association of sarcopenia with orthostatic hypotension which is a significant precursor to falls and related injuries.

#### **Materials & Methods**

Outpatients over 75 years of age were prospectively enrolled and those who were eligible underwent comprehensive sarcopenia assessment including measurement of muscle mass, strength, physical performance, anthropometric measurements along with frailty tests. Patients who were classified as sarcopenic or non-sarcopenic based on these measurements underwent both supine and standing blood pressure measurements. The frequency of orthostatic hypotension was compared between the two groups.

#### Results

Overall 91 patients were enrolled in the study. Of these patients 29 (31.9%) had sarcopenia. Mean age was 79.3±4.0 and 73 (80.2%) were female. There was no statistical difference in measurements of functional tests which consisted of gait speed, timed up-and-go test and handgrip strength. However, timed sit-to-stand test values were higher in sarcopenic patients (18.2±7.9 vs 15.0±5.1 p=0.04). Patients with sarcopenia developed orthostatic hypotension and intolerance more often compared to the non-sarcopenic patients (n=15 [50.0%] vs n=14 [23.0%] p<0.01 and n=13 [44.8%] vs n=9 [15.3%] p<0.01 respectively). The adjusted odds ratio for sarcopenia was 3.3 (1.1-9.2 95% CI, p=0.02).

### Discussion

# Conclusion

Age-related sarcopenia increases the risk of orthostatic hypotension in the elderly. This may in part explain the increased incidence of falls and also help identification of risky elderly patients for orthostatic blood pressure drops.

# References

# Abstract: 277 - Date: 2019-07-06 16:15:19pm

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# **Topic of Summary**

PRM in geriatric conditions

## **Title of Summary**

ELDERLY SARCOPENIA AND DIABETES MELLITUS TYPE II

## **Keywords**

elderly, sarcopenia, diabetes mellitus type II

## **Authors**

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## Introduction

Body\'s composition analysis for assessing the\r\nhealth and nutrition of the individual is a useful test. Diseases\r\nsuch as diabetes mellitus may be associated with adverse\r\nchanges in body composition. Sarcopenia is characterized by a\r\nprogressive and generalized loss of skeletal muscle mass and\r\nfunctionality. However, there is a lack of studies that examine the\r\nassociation of sarcopenia in patients with type 2 diabetes mellitus\r\n(T2DM).

# **Materials & Methods**

We studied 35 individuals who visited endocrinological outpatient clinics,\r\naged 20-80 years, to assess the presence of sarcopenia in T2DM\r\nin comparison with 16 controls. All subjects were examined with DXA (HOLOGIC HORIZON W). Sarcopenia was defined using the European Working Group on Sarcopenia in Elderly, EWGOSP) that includes both muscle mass (skeletal muscle index, SMI) and muscle function/physical activity (walking speed as a measure of physical performance). Appendicular skeletal mass (ASM) (in kg)\r\nwas delivered from DXA. The skeletal muscle index (SMI) was calculated\r\nas ASM divided by the square of the body height in meters. Low\r\nmuscle mass is defined as SMI <7.0 kg/m2 in males and SMI <5.7\r\nkg/m2 in females. Low physical performance was defined as a\r\nwalking speed of <0.8 m/s.

# Results

The incidence of sarcopenia was significantly higher in\r\npatients with T2DM than in healthy subjects (27% vs. 20%, p=0.01\r\nfor sarcopenia) and higher in elderly participants (70 y and over)\r\nvs. younger (40% vs. 12%, p<0.001). Walking velocity was significantly\r\nlower in patients with T2DM than in controls men and\r\nwomen (1.02 $\pm$ 0.34 vs. 1.25 $\pm$ 0.15, p<0.001) and (1.01 $\pm$ 0.22 vs.\r\n1.27 $\pm$ 0.12, p<0.001), respectively.

# **Discussion**

# Conclusion

The prevalence of sarcopenia in patients with T2DM\r\nis moderate and gradually increases significantly in older men.

# Abstract: 278 - Date: 2019-07-06 16:31:42pm

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# **Topic of Summary**

Community medicine and associative networks in handicap

# **Title of Summary**

Education Program for Carers in Facilities with Neuro Disabled Subjects (EPoCFiNDS)

# **Keywords**

Carers, Aging, Neurodisability, Rehabilitation, Care

### **Authors**

Yannis Dionyssiotis; Eleftheria Vellidou; Stathis Konstantinidis; Pavlos Sarafis; Sofia Artemi; Katerina Stergiopoulou; Anne Mette Vind; Niculina Birsanu; Sophie Duport; Dimitrios Koutsouris; and EPoCFiNDS Consensus attendants group

#### Affiliations

National and Technical University of Athens, Greece; Foundation for Care of Neurological Illnesses, Greece; University of Nottingham, UK; Social and Health School Herning, Denmark; Asociatia Habilitas Bucharest, Romania; Royal Hospital of Neurodisability London, UK; Cyprus University of Technology, Cyprus

## Introduction

The goal of Education Program for Carers in Facilities with Neuro Disabled Subjects (EPoCFiNDS), is to create training programs for carers in neurodisabled subjects living in various facilities.

# **Materials & Methods**

We are aiming to develop a systematic approach on\r\nsupporting professional carers to acquire and develop\r\nprofessional skills and key competences in order to work with\r\npeople who suffer from neuro- disabilities. This approach\r\nwill be the basis on developing training programs for carers\r\nthroughout different European facilities

# Results

The skills acquired by carers in their caring role are relevant to the competencies required for occupations and qualifications in community, aged care, health, youth, housing and disability support services. With the aging population the number of subjects with neurological lesions living in hospices and long-term care facilities is increased. It makes a strong case to educate carers to help these subjects. There is a lack of evidence on how to design and implement mechanisms such as foundation skills courses and programs to best meet the needs of carers.

## Discussion

## Conclusion

In Europe we need to develop educational programs, aimed at volunteers, relatives or any other group of people so that they better organize benefits care for neurodisabled subjects.

#### References

Education Program for Carers in Facilities\r\nwith Neuro Disabled Subjects (EPoCFiNDS) is an\r\nErasmus+ Project (Code: 2018-1-EL01-KA202-047936)

# Abstract: 281 - Date: 2019-07-07 08:19:38am

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# **Topic of Summary**

Robotics, virtual reality and innovatives techniques in PRM

# **Title of Summary**

Developing countries: how simple tele-care could support functioning recovery.

# Keywords

Recently are encreasing many Telerehabilitation proposal and settings, surely effective and usefullness, but needing relevant investments and to be based on strong Health Services. Impossible to be applied in developing countries where Rehabilitation services need to develop and have very often great distances to overcome after discharge, to support and verify the real functioning recovery. So a simple solution based on tele-care focused on aspects and parameters regarding patient health, training and performance, covering also indications and support for family and community. In this way we could have real positive outcome and in the same time demonstration about the relevance and efficacy of PRM interventions from acute up to community.

# **Authors**

Alessandro Giustini

# **Affiliations**

Santo Stefano Rehabilitation Group-Italy

## Introduction

Discuss to reach if possible an agreement about this proposal.

# **Materials & Methods**

Define a modality for this Tele-Care focused on distance recovery finishing.

#### Results

Create a working group to apply this modality, for example in some relevant health conditions as Stroke and SCI, in developing countries.

### **Discussion**

## Conclusion

To support PRM Service development in Health and Community services in developing Countries

## References

none

# Abstract: 282 - Date: 2019-07-07 08:32:11am

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# **Topic of Summary**

Rehabilitation services in Mediterranean countries and Africa

## **Title of Summary**

Community health services and Primary Rehabilitation services in developing countries

# Keywords

Community based, Primary Rehabilitation interventions

## **Authors**

Alessandro Giustini

## **Affiliations**

Santo Stefano Rehabilitation Group-Italy

# Introduction

To avoid misanderstanding regarding Community Based Rehabilitation as a substitute for PRM in developing countries.

# **Materials & Methods**

To decline and specify contents and modality for Primary Rehabilitation services and interventions, connected with specialized PRM facilities, in the whole Community activity toward disabled people

## Results

To share PRM knowledge and activities into the community before and after specialized interventions, to help efficacy up to participation and functioning.

# **Discussion**

# Conclusion

To show the relevance of PRM participation, in developing countries too, to built a complete Health Service defending as necessary (and possible) disabled people rights.

#### References

none

# Abstract: 285 - Date: 2019-07-09 11:34:42am

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# **Topic of Summary**

PRM and oncologic patients

# **Title of Summary**

Stewart-Treves syndrome: A rare complication of breast cancer related-Lymphedema

## **Keywords**

breast cancer-related lymphedema, complication, Stewart Treves syndrome

#### **Authors**

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## Introduction

The Stewart-Treves syndrome is an angiosarcoma developed on a longstanding lymphadenomatous extremity. We report the case on a Stewart-Treves syndrome in a woman who underwent modified-radical-mastectomy for breast-carcinoma nine-years earlier and having breast cancer-related lymphedema (BCRL) for 7 years.

# **Materials & Methods**

A 56-year-old woman presented to our institution with chronic lymphedema of the left arm. She had modified radical mastectomy for grade 2 invasive ductal breast cancer in 2007. She had received chemotherapy, irradiation and hormonotherapy in 2007. Lymphedema was present for more than 7 years. She denied any trauma or infection history. Her physical examination revealed stage-2-lymphedema with Stemmer sign positivity, in the right upper extremity. İnspection indicated a tender purplish lesion (1.5 cm x 4 cm) on the medial half of the patient\'s affected arm. Depending on the metastasis suspicion, MRI was requested. Up to the MRI report; the lesion has spreaded-out quickly with different-sized scattered pink and purple-colored lesions on the affected area.

#### Results

A prompt skin biopsy was performed and reported as lymphangiosarcoma (Stewart-Treves syndrome). The consultation with patient\'s oncologist and orthopedist revealed with amputation decision. An immediate arm amputation was performed. On her final visit-2

months after the operation, the amputation scar was healed clearly and pregabalin was prescribed for the phantom pain.

## Discussion

#### Conclusion

In conclusion Stewart-Treves Syndrome is a rare but important complication of BCRL. The awareness and detailed investigation as well as prompt surgical procedures are needed for BCRL patients with different and fast-progressing skin lesions.

#### References

# Abstract: 286 - Date: 2019-07-09 11:41:55am

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# **Topic of Summary**

PRM and oncologic patients

# **Title of Summary**

THE DEMOGRAPHIC AND CLINICAL CHARACTERISTICS OF PATIENTS IN A UNIVERSITY LYMPHEDEMA REHABILITATION CENTER

# Keywords

lymphedema, etiology, rehabilitation, frequency

# **Authors**

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# Introduction

Lymphedema is a major healthcare problem in both developed and developing countries. The aim of this study was to evaluate the etiological frequency and characteristics of lymphedema-patients who presented to lymphedema unit between November 2016—December 2019.

# **Materials & Methods**

All patients referring to lymphedema unit were screened and the frequency regarding to the etiologies of the lymphedema were determined. The demographic and clinical characteristics were recorded.

## Results

A total of 565 patients with lymphedema were presented to-our lymphedema unit during 2 years (mean age: 54.12±11.75years). 10.5% patients had primary and 89.5% had secondary lymphedema. 542 (95.9%) patients were female and 23 (4.1%) were male. 33.5% of patients were obese. Most of the patients with secondary lymphedema had upper extremity lymphedema due cancer surgery (84.6%). The etiology of lower-limb lymphedema was also cancer in majority of the patients (43%), followed by phlebo-lymphedema (30%) and lipedema (12%). The duration of lymphedema was more than six months in most of the patients (77.1%) and the stage of lymphedema was commonly spontaneous irreversible (63.1%). 44.6% of the patients stated that they did not receive any therapy for lymphedema.

#### Discussion

#### Conclusion

Majority-of patients had secondary upper extremity lymphedema due to breast cancer surgery. The referring time to lymphedema unit was long and lymphedema stage was progressed at submission in majority of the patients. We suggest educational activities for both patients and health care providers, especially in cancer-surgery wards in order to increase the awareness of lymphedema and facilitate early reference to the lymphedema units for lymphedema rehabilitation.

#### References

# Abstract: 288 - Date: 2019-07-10 07:05:12am

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# **Topic of Summary**

Robotics, virtual reality and innovatives techniques in PRM

# **Title of Summary**

Applying Transcranial Direct Current Stimulation in a cognitive rehabilitation program: Differences observed in focal and diffuse lesions

# Keywords

tDCS, cognitive rehabilitation, stroke, TBI

# Authors

Eleftherios Stefas; Alexandra Pantzartzidou; Yannis Dionyssiotis; Dimitra Minaritzi; Evgenia-Peristera Kouki

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#### Introduction

We aimed to investigate the benefits of Transcranial Direct Current Stimulation (tDCS) in patients with left/right focal brain damage and diffuse lesions i.e. traumatic brain injury (TBI). We hypothesized that tDCS will have a positive impact on the individuals' outcome.

## **Materials & Methods**

We applied tDCS during the rehabilitation program of 10 patients with focal stroke-related lesions (six right and four left), and four TBI patients 14 individuals as controls, who received treatment as usual. Mean age was 58.92 years, and 59.87 years, for tDCS group and controls, respectively. Mean duration of hospitalization was 68.57 days and 69.57 days for the tDCS and control group, respectively. Montreal Cognitive Assessment (MoCA; Nasreddine et al., 2005) was administered for baseline and outcome measures.

#### Results

Participants who had received tDCS demonstrating higher performance on the outcome measure, compared to the control group. Within the experimental group, participants with TBI demonstrated quicker recovery compared to participants with right/left CVA. Age ( $\rho$ =-0.086,  $\rho$ =0.664) and duration of hospitalization ( $\rho$ =0.223,  $\rho$ =0.255) were not associated with final cognitive outcome.

#### **Discussion**

## Conclusion

Our findings support the positive impact of tDCS on all three groups of neurological patients. Individuals with TBI benefitted equally from a regular rehabilitation program as they did when tDCS was implemented, as supported by previous research. Participants with focal damage demonstrated significant improvement when they attended a session that incorporated tDCS. Future work should extensively investigate which factors maximize tDCS\'s influence on cognitive recovery.

## References

# Abstract: 291 - Date: 2019-07-10 10:54:57am

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# **Topic of Summary**

Orthotics and prosthesis in PRM

# **Title of Summary**

Functional independence of multiple limb amputees, caused by Purpura Fulminans infection, after Inpatient rehabilitation at a Rehabilitation Centre

## **Keywords**

amputees, prothesis, PMR, inpatient rehabilitation

#### **Authors**

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### Introduction

Following the amputation of a limb the path to regaining functional independence is often long and arduous, in the case of a multiple limb amputation, it becomes even more challenging.\r\nAmputations caused by Purpura Fulminans (PF) are a rare occurrence, secondary to an acute infection and subsequent intravascular thrombosis with necrosis of the skin and subcutaneous\r\ntissues. Besides the amputation commonly affecting multiple limbs other common sequelae of this syndrome are, organ dysfunction, adjustment disorder and extensive wounds. We describe the inpatient rehabilitation program by a multiprofessional team which included rehabilitation nurses, Psysical Therapists, Occupational therapists, Orthoprotestetic technicians and lead by a PMR specialist.\r\nRehabilitation management, common obstacles and medical complications, prostetic considerations as well as which infectious agents caused the infection are discussed.

### **Materials & Methods**

In this retrospective study we review the cases of 7 patients, with multiple limb amputations following PF, who underwent an intensive inpatient rehabilitation program at our Rehabilitation center. We compare their Functional Independence Measure (FIM) scores and adjustment to prosthetics, at admission and discharge. We also describe the main medical problems and occurrences during their rehabilitation programs.

## Results

Every patient was fitted with custom made prosthesis and improved their FIM, during the rehabilitation program. Skin problems (pressure ulcers and slow scarring of the tissues) where the most common complication.

# **Discussion**

### Conclusion

Inpatient multiprofessional rehabilitation programme is an effective to treat and rehabilitate patients with these problems.

# Abstract: 293 - Date: 2019-07-10 22:23:51pm

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# **Topic of Summary**

PRM in paediatric problems

# **Title of Summary**

Screening and prevention of hip dislocation in cerebral palsy.

# **Keywords**

cerebral palsy, hip dislocation, Reimers index

#### **Authors**

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#### Introduction

Report the different sub types of cerebral palsy observed in the Orthopedic Rehabilitation consultation and focus on the use of the Reimers index in the screening and management of progressive hip subluxation particularly in children with high risk.

## **Materials & Methods**

Cross-sectional study September 2017- September 2018.\r\nList all sub types of cerebral palsy oriented to Pediatric Orthopedic Rehabilitation. \r\nPelvic X-ray to all at-risk patients, calculate Reimers index. Preventive treatment of all children with an index higher than 10%.\r\n

## Results

90 Children with cerebral palsy were seen in consultation among them 40 children had the quadriplegic form (at high risk of developing hip excentration), 18 Children have a Reimers index higher than 10%, 9 have light excentration.\r\nAfter treatment there was stabilization of the index in 8 patients.\r\n

## Discussion

# Conclusion

The Reimers index is a good tool for screening a silent hip dislocation.

# Abstract: 295 - Date: 2019-07-11 09:22:49am

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# **Topic of Summary**

PRM in orthopaedics and musculoskeletal disorders

# **Title of Summary**

Age- and Sex-specific Effects in Paravertebral Surface Electromyographic Back Extensor Muscle Fatigue in Chronic Low Back Pain

# **Keywords**

muscle fatigue, low back pain, surface electromyography, aging

#### **Authors**

Ebenbichler Gerold (1,2); Habenicht Richard (2); Ziegelbecker Sara (2); Kollmitzer Josef (4,2); Mair Patrick (3); Kienbacher Thomas (2)

#### Affiliations

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# Introduction

The impact of aging on back muscles is not well understood, yet may hold clues to both normal aging and chronic low back pain. This study sought to investigate whether the median frequency (MF) surface electromyographic (SEMG) back muscle fatigue method – a surrogate measure of glycolytic muscle metabolism - would be as sensitive as it is in healthy individuals to detect age- and sex-specific differences in neuromuscular and muscle metabolic functions in individuals with cLBP in a reliable way.

# **Materials & Methods**

With participants seated on a dynamometer (20° trunk anteflexion), paraspinal SEMG activity was recorded bilaterally from the multifidus (L5), longissimus (L2) and iliolumbalis (L1) muscles during isometric, sustained back extensions loaded at 80% of maximum from 117 younger (58 females) and 112 older (56 female) cLBP individuals. Tests were repeated after 1-2 days and 6 weeks. Median frequency (MF), the SEMG variable indicating neuromuscular fatigue, was analyzed.

# Results

Maximum back extensor strength was comparable between younger and older participants. Significantly less MF-SEMG back muscle fatigue was observed in older than younger, or in older female than male cLBP individuals. Relative reliability was excellent, but absolute reliability appeared large for this SEMG-fatigue measure.

# Discussion

## Conclusion

Findings suggest that neuromuscular changes that may occur with the perception of cLBP unlikely mask the age-specific diagnostic potential of the MF-SEMG back extensor fatigue method. Thus, this method possesses a great potential for being further developed toward a valuable biomarker intended to very early detect back muscle function at risk for sarcopenia.

#### References

# Abstract: 296 - Date: 2019-07-11 11:04:59am

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# **Topic of Summary**

PRM in orthopaedics and musculoskeletal disorders

#### Title of Summary

Fatigue, fear of falling, health-related quality of life and mood in falling pregnant women

## **Keywords**

Balance, Fall, Fatigue, Health Profile, Mood, Pregnancy

# **Authors**

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## Introduction

There are studies on the deterioration of balance and postural stability in pregnant women. In this study, we aimed to evaluate the relationship between fatigue, fear of falling, emotional state and health-related quality of life of individuals falling during pregnancy.

# **Materials & Methods**

130 singleton pregnant were included the study and they were divided into two groups as falling pregnant women and non falling pregnant women. Pregnancy in one group was performed one-leg balance test. Fatigue severity scale, Beck depression inventory, international fall efficiency scale, Nottingham health profile tests were applied to both groups. The obtained data were compared between the groups.

#### Results

Fatigue severity scale (group 1:  $4.9 \pm 1.6$ , group 2:  $4.0 \pm 1.8$ , p: 0.002), Beck depression inventory (group 1:  $23.9 \pm 12.5$ ), group 2:  $10.8 \pm 7.3$ , p <0.001), international fall efficiency scale (FES) (group 1:  $39.5 \pm 10.5$ , group 2:  $26.6 \pm 6.6$ , p <0.001). ), Nottingham health profile scores (group 1:  $321.9 \pm 123.1$ , group 2:  $189.4 \pm 96.1$ , p: <0.001) were significantly higher in falling pregnant women. Also, there was a positive correlation between fall efficiency scale

and fatigue severity scale (r: 0.442, p <0.001), BDI (r: 0.738, p <0.001) and nothingam health profile (r: 0.713, p <0.001) and an significant negative correlation between one-leg balance test (r: -0.355, p <0.001).

#### Discussion

#### Conclusion

Fatigue, depression, fear of falling and balance disorder may cause falls in pregnant women.

#### References

# Abstract: 299 - Date: 2019-07-11 15:49:28pm

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# **Topic of Summary**

PRM in paediatric problems

# **Title of Summary**

SENSITIVITY OF ELECTROMYONEUROGRAPHIC PARAMATERES IN SHORT TERM FUNCTIONAL OUTCOME OF PEDIATRIC PATIENTS WITH TRAUMATIC PERONEAL NERVE LESION

# **Keywords**

Electromyoneurography; Functional outcome; Peroneal nerve lesion; Children

# **Authors**

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1Faculty of Medicine, University of Belgrade, Belgrade, Serbia; 2Department of Physical Medicine and Rehabilitation, University Childrens Hospital, Belgrade, Serbia

# Introduction

We aimed to analyze the sensitivity of electroneurographic (ENG) and electromyographic (EMG) parameters in the evaluation of traumatic peroneal nerve lesion in pediatric population with regards to treatment outcome.

# **Materials & Methods**

The prospective study included 34 patients with acute lesions of peroneal nerve (LPN). Age range was 5-16 years with compressive etiology. The diagnostics was done between 10-14 days post lesion onset. Amplitudes, distal latencies (DL) and conduction velocities were analyzed in ENG and pathological spontaneous activity and motor unit action potentials

(MUAP) in EMG. Children were functionally analyzed initially at exam and 3 months after the lesion onset.

#### Results

Decrease in amplitudes along with increased distal latencies in ENG and presence of spontaneous pathological activity on EMG are shown to have the strongest correlation with decreased functional outcome of muscles innervated by peroneal nerve, while the presence of sporadic spontaneous pathological activity with amplitudes in normative ranges on ENG are shown to have not very strong correlation with functional outcome. Isolated increase in distal latencies are shown to have week correlation with functional outcome.

## **Discussion**

# Conclusion

Both ENG and EMG parameters are shown to be sensitive in evaluation of short term functional outcome in patients with LPN, with higher sensitivity when presence of pathological findings were noticed both in ENG and EMG studies. These findings might have impact in defining treatment protocols for patients with LPN for best optimal functional recovery both short term and long term.

#### References

# Abstract: 301 - Date: 2019-07-12 09:39:53am

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# **Topic of Summary**

PRM in orthopaedics and musculoskeletal disorders

# **Title of Summary**

UTILITY OF SRS – 22 IN THE MANAGEMENT OF IDIOPATHIC SCOLIOSIS: WHAT WORRIES OUR PATIENTS.

# Keywords

Idiopathic Scoliosis. SRS-22. Quality of Life.

#### **Authors**

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#### Introduction

Scoliosis is a three-dimensional spine deformity (frontal and sagittal planes) defined by a Cobb's angle >10°. Non-operative treatment is based on observation or corrective casts and part- or full-time rigid orthosis. Treatment's goals are: prevent curve progression and consequently surgery, improve patients' aesthetic and quality of life (QoL). \r\nThe aim of this study is to evaluate the impact of scoliosis.

#### Materials & Methods

We selected a group of 46 patients treated in our service from September to December 2018. SRS-22 assesses QoL in 5 dimensions: function, pain, self-image, mental health and treatment's satisfaction. Using SPSS 22.0 we analyzed the relationship between sex (male, female;), chronological curve (early onset, adolescent, adult;), type (simple, double), severity (mild, moderate, severe, according to SOSORT's classification), treatment (observation, orthopedic) and SRS-22 dimension's average score. All subjects included signed informed consent.

## Results

Significant differences were found in pain (p<0.049) and self-image (p<0.001) depending on curve's severity, being greater in severe (>  $40^{\circ}$ ). Likewise, significant differences were observed according to chronology for function (p<0.003), pain (p<0.001) and self-image (p<0.044) in all groups, being higher in adults. Mental health has a greater significant impact on females (p<0.001). Self-image has a greater significant impact on patients treated with reduction and orthosis (p<0.043).

#### **Discussion**

#### Conclusion

Our results supports the usefulness of SRS-22 in determining the impact on QoL and it is one of the factors we must take into account on the management of these.

#### References

PhD. Alfonso Muriel García. Bioestadística Clínica. Instituto Ramón y Cajal de Investigación Sanitaria (IRYCIS).

# Abstract: 302 - Date: 2019-07-12 15:31:54pm

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## **Topic of Summary**

Advances in PRM diagnostics

# **Title of Summary**

DEVELOPMENT OF ULTRASOUND BIOMARKERS FOR THE DIAGNOSIS AND FOLLOW-UP OF SARCOPENI

# Keywords

Sarcopenia, dual energy X-ray absorptiometry (DXA), ultrasound, exercise

## **Authors**

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## Introduction

The estimation of appendicular muscle mass is necessary for the diagnosis of sarcopenia. Ultrasonography presents several advantages in the examination of musculoskeletal system, compared to other imaging modalities. However, its role in the diagnosis of sarcopenia is still under investigation. The purpose of our study is to evaluate: (a) the reliability of quantitative ultrasound measurements of facial, upper and lower limb muscles; (b) the usefulness of ultrasonography in the diagnosis of sarcopenia; and (c) the efficacy of a specialized exercise programme.

## **Materials & Methods**

The study included 85 individuals over 65 years of age. They were assessed according to the diagnostic algorithm suggested by the revised European consensus on definition and diagnosis of sarcopenia (EWGSOP2). Individuals fulfilling the clinical diagnostic criteria underwent full body dual energy absorptiometry for the estimation of appendicular muscle mass. All participants of this study were examined by ultrasound of facial, upper and lower limb muscles. Sarcopenia was diagnosed in 20 out of 85 individuals. Sarcopenic patients were referred to an exercise program comprising strengthening and balance exercises for 12 weeks, after which clinical and laboratory tests were repeated.

# Results

The preliminary data of our study indicate that quantitative musculoskeletal ultrasound is a reliable imaging modality for the estimation of skeletal muscle mass. Portability, non-exposure to ionizing radiation and reduced cost of ultrasound equipment are important advantages over the gold standard imaging techniques used in the diagnosis of sarcopenia.

# Discussion

#### Conclusion

Ultrasound can become an important diagnostic tool in the assessment of sarcopenia.

# References

Operational Program \"Human Resources Development, Education and Lifelong Learning", the European Union (European Social Fund/ ΕΣΠΑ 2014- 2020) and Greek national funds.

# Abstract: 304 - Date: 2019-07-13 16:41:53pm

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# **Topic of Summary**

PRM in orthopaedics and musculoskeletal disorders

# **Title of Summary**

The Effect of Vitamin D and Exercise on Balance in Postmenopausal Women: A prospective, randomized, controlled, single blinded study

# **Keywords**

balance; exercise; fall risk; vitamin D

#### **Authors**

Tugba Ozsoy-Unubol, Zeynep Candan, Nur Filiz Ok, Emel Atar, Emre Ata, Figen Yılmaz

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#### Introduction

To evaluate the effects of vitamin D3 and exercise on balance, fall risk and quality of life in postmenopausal women.

#### **Materials & Methods**

In this prospective, randomized, controlled, single-blind study, postmenopausal women with vitamin D3 <10ng/ml and >30 ng/ml were included. Patients with <10ng/ml vitamin D3 were randomized to 3 groups: group-I (vitaminD3 replacement, 50.000IU vitaminD3/oral/8 weeks), group-II (core and balance exercises), and group-III (vitaminD3 replacement, 50.000IU vitaminD3/oral/8 weeks plus core and balance exercises). The participants with >30ng/ml vitamin D3 (group-IV) were designed as control group and received the core and balance exercises. The participants were evaluated before and after 8 weeks with Berg balance scale, Biodex balance system (postural stability tests and fall risk assessment) and Nottingham Health Profile (NHP). (NCT036084889)

# Results

Ninety-nine participants (n= 21, 18, 20, 40, respectively) completed the study. Baseline clinical characteristics and balance scores were similar. Control group had significantly lower baseline scores of NHP in total, pain, emotional reactions, and social isolation. All groups had significant improvement in balance scores. Group I had significantly better NHP scores except energy domain. Group II had better NHP scores but the difference was not significant. Group III and IV had significant improvements in emotional reactions, physical activities, and total score of NHP.

## Discussion

## Conclusion

Although there was no difference in the baseline balance scores according to vitamin D levels, both balance and quality of life parameters were improved with exercise and vitamin D replacement. Vitamin D3 and exercises are essential for balance and fall prevention in postmenopausal women.

#### References

# Abstract: 306 - Date: 2019-07-13 17:31:43pm

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## **Topic of Summary**

PRM in orthopaedics and musculoskeletal disorders

#### **Title of Summary**

Predictive factors of functional outcome after total knee replacement

## **Keywords**

total knee arthroplasty; functional outcome; quality of life

#### **Authors**

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#### **Affiliations**

Fattouma Bourguiba University Hospital; Faculty of Medicine; University of Monastir, Tunisia

#### Introduction

to determine the predictive factors of good functional outcome after Total Knee Arthroplasty (TKA) and to evaluate its impact on patients' Quality Of Life (QOL).

#### **Materials & Methods**

It was a cross sectional study over a three-month period (November 2018-January 2019) including 37 patients and 50 TKAs (13 bilateral operations). Patients were operated by the same surgeon and received the same type of prosthesis. The functional outcome and the QOL were assessed according to the WOMAC score and to the SF-36 score.

## Results

The median age was 69 years. Women represented 75.7% of cases. Patients suffered from their knee osteoarthritis for a mean period of 7 years and 10 months before surgery. They were assessed at a mean period of four years and eight months after TKA. Predictive factors of good functional outcome were age<65years (OR=19.2; p=0.011); good preoperative WOMAC score (OR=18.1; p=0.007) and low preoperative level of pain (OR=9; p=0.028). Good mental and physical QOL were associated to good postoperative functional result (WOMAC) and to patients' satisfaction.

# **Discussion**

## Conclusion

According to our results, younger patients (age<65 years), those with better preoperative WOMAC score and lower preoperative pain were 19 times, 18 times and 9 times more likely to have good functional results respectively. Baseline scores seem to be the best predictors of the outcome after TKA. Being such simple and reproducible measures, their systematic use can eventually help in the management of the long waiting lists of patients needing total knee replacement. \r/n\r/n

#### References

this work was conducted in accordance with current ethical standards and regulations in biomedical research

# Abstract: 312 - Date: 2019-07-14 17:45:32pm

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# **Topic of Summary**

PRM and oncologic patients

# **Title of Summary**

Life expectancy of the oncologic patients after their discharge from inpatient rehabilitation program

# Keywords

cancer, rehabilitation, life expectancy

# Authors

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## Introduction

Treatment advances have led to improved survival rates in cancer patients. As a result, patients with physical impairments as a consequence of their disease or from its treatment are living longer and becoming a potential client of medical rehabilitation services. Despite of treatment effectiveness improvement, a stigma about cancer patients still exists and they are perceived as a palliative population with short survival and poor rehabilitation potential. \r\nThe aim of the study was to find out, if the life expectancy of oncological patients after discharge from inpatient rehabilitation differs significantly from other groups of patients.

# **Materials & Methods**

56 patients passed away after discharge from Rehabilitation Department of Soroka Medical Center over the past 3 years. All patients were divided into 5 groups, according to their diagnosis: Cancer, Stroke, Amputee, Fracture and Deconditioning. \r\nLife expectancy after discharge in days, Functional Independence Measure (FIM) at discharge and discharge destination were fixed from medical records and analyzed for all patients.

#### Results

FIM at discharge was quite similar in all groups (respectively 95.4, 75.3, 91.0, 80.6, 85.6) and about 60-70% of patients discharged home in all diagnostic categories. Oncology patients\' post-discharge life expectancy was found to be not significantly different from any other admission diagnosis: 259.6 for cancer, 264.3 for deconditioning, 193.2 for amputees, 384.0 for stroke and 365.0 for fractures.

## **Discussion**

## Conclusion

Our study strengthens the recent data about the importance of inpatient rehabilitation program for cancer patients and sheds light on their life expectance after discharge from the rehabilitation department.

#### References

# Abstract: 314 - Date: 2019-07-14 21:00:51pm

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# **Topic of Summary**

Rehabilitation services in Mediterranean countries and Africa

## **Title of Summary**

Integrated Continuous Care after a Stroke – the Portuguese experience

# Keywords

stroke; dependecy; Bamford classification; hospitalization discharge; continuous care unit

#### **Authors**

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# Introduction

The Portuguese National Network of Integrated Continuous Care (NNICC) consists of a group of public and private institutions that provide health care and social support to patients in situations of dependency, both at home and/or in their own facilities.\r\nThe aim of this study is to retrospectively analyze the admission of stroke patients to NNICC Units (NNICCU).

#### **Materials & Methods**

A sample of 251 patients admitted to the Stroke Unit with ischemic stroke was distributed according to the Bamford Stroke Classification (deaths were excluded). All patients were evaluated in regards to rehabilitation potential and need to maintain inpatient rehabilitation program after clinical discharge. Information on NNICCU admission was collected. Data was analyzed with IBM SPSS 25.0. Survival analysis using Kaplan Meier curves and Logrank tests were performed.

#### Results

The admission to a NNICCU was the destination of 33.9% (n=85) of patients, at hospital discharge. In regards to the subtype of stroke, 52.6% (n = 51) of TACI patients, 29.8% (n=14) of POCI patients, 22.7% (n=10) of PACI patients and 15.9% (n=10) of LACI patients were admitted to a NNICCU. Hospitalization length's median value was 24 days for patients who were later admitted to NNICCU versus 7 days for the remaining patients (p<0.001).

#### **Discussion**

# Conclusion

Despite its necessity in some cases, referring to NNICCU can contribute to increased hospital length-of-stay. Prolonged length-of-stay is associated with increased mortality and poor clinical and functional outcomes. The majority of patients admitted to NNICCU had strokes involving larger brain territories.

## References

# Abstract: 316 - Date: 2019-07-14 22:23:24pm

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## **Topic of Summary**

Special therapeutic methods in PRM

# **Title of Summary**

Efficacy of Platelet-Rich Plasma Injections for Osteoarthritis

### **Keywords**

Platelet-Rich Plasma, Osteoarthritis, Hip, Knee

# Authors

## Affiliations

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#### Introduction

Platelet-rich plasma (PRP) is an autologous concentration of cytokines growth factors from platelets in plasma, which is used to repair damaged cartilage, tendons, ligaments, muscles, or bone. There is still no complete scientific and clinical consensus on the PRP procedure for the treatment of osteoarthritis. However, scientists and clinical experts who have reviewed the existing body of research believe the evidence is largely encouraging and merits further investigation. The objective of this study was to test the efficacy potential of PRP for treatment hip (HOA) and knee osteoarthritis (KOA).

# **Materials & Methods**

PRP was isolated from brachial artery, controlled by ultrasound, of 100 persons ranging in age from 18 to 65 years, during the first half of 2018. After isolation and activation, those instillations of PRP were done in HOA and KOA, grade II-III. Patients were examined for range of motion, improvements in VAS scale, WOMAC score, and ultrasound properties of articular cartilage through the International Cartilage Repair Society (ICRS) grades, three, six and twelve months after intraarticular application.

#### Results

Treated patients showed a significant improvement in all parameters compared to the period before the application (p < 0.05). Changes in range of motion, VAS scale and WOMAC score are registered immediately after three months of procedure, and improvements were maintained they were held throughout the first year of their PRP procedure. After three months significant differences were observed in the ultrasound measurement of the cartilage thickness.

## Discussion

#### Conclusion

This research into the applications of PRP for HOA and KOA has indicated efficacy this treatment.

# Abstract: 318 - Date: 2019-07-15 01:24:59am

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## **Topic of Summary**

PRM in orthopaedics and musculoskeletal disorders

# **Title of Summary**

EFFECT OF ELECTROMAGNETIC FIELD ON FIBROMYALGIA SYMPTOMS AND SCORES

# **Keywords**

Fibromyalgia, electromagnetic field.

#### **Authors**

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### Introduction

Noting that fibromyalgia patients scuffle with communal symptoms of electrosensitivity, we aim to study the possible relation between fibromyalgia scores and exposure to electromagnetic radiation.

# **Materials & Methods**

The study included 80 FMS patients diagnosed according to ACR 2010. The Revised Fibromyalgia impact questionnaire (FIQR) was used for functional assessment.. Psychological condition was assessed using Montgomery-Asberg Depression Rating Scale (MADRS). The patients answered a questionnaire assessing the magnitude of exposure to electromagnetic field . Device use index was calculated by multiplying the rate of its use per day by 365 by the total number of years of use. The indices were correlated with fibromyalgia scores including wide spread pain index (WPI), system severity score (SS), visual analogue pain score (VAS) , FIQR and MADRS.

# Results

Presence of a near-by cellular phone or electric tower didn`t significantly affect disease scores, nor VAS (p>0.05). Microwave users had a higher SS and WPI scores than non-users, but the difference was not statistically significant (p=0.079&0.057) respectively. SS score significantly increased with higher TV watching duration while MADRS score significantly decreased with higher cellular phone use indices. The cellular phone use index was positively correlated with VAS among patients less than 30 years old but negatively correlated with MADRS score among patients group from 30-50 years old (  $P=0.01\ \& 0.005$  respectively) .\r\n\r\n

# Discussion

#### Conclusion

This study highlights a pathological link between fibromyalgia and exposure to electromagnetic devices .This could possibly be one of the underlying or at least augmenting factors of fibromyalgia symptoms\r\n\r\n

## References

# Abstract: 323 - Date: 2019-07-15 06:46:04am

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## **Topic of Summary**

PRM in orthopaedics and musculoskeletal disorders

# **Title of Summary**

Clinical outcomes of femur lengthening with two different techniques in achondroplastic patients

# **Keywords**

# **Authors**

Haridimos Tsibidakis1; Alexandros Farmakidis2; Artemisia Panou3; Luca Corti1; Andrea Biffi1; Marco Camagni1; Francesco Guerreschi1

# **Affiliations**

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# Introduction

Comparison of two different techniques of lengthening: external circular external and circular external fixator over and intramedullary nail.

# **Materials & Methods**

twelve acondroplasic patients with a mean age of 18.4 years (range: 16-19y) were divided in two groups based on their treatment. Gruppo A was treated by only an extrernal fixator while group B was treated with external fixator over nt and intramedullary nail. The Healing index, patient's satisfaction index and Knee ROM at the end of treatment and at 6 and 12 months after frame's removal were calculated.

## Results

mean lengthening obtained at the end of treatment was 8,67 cm (range 8- 9 cm) for group A and 8,75 for group B (range 8-10). Time to removal was 398 days (range:372- 415 days) for group A vs 263 days of group B (range:236 to 310 days) \r\nRegarding the Healing index a statistically significant reduction was observed in patients intramedullary nail (p value < 0,001). \r\nRange of Motion at the time of frame's removal was 80,83°,102,50° at 6 months and 118,33° at 12 months for group A. Range of Motion at the time of frame's removal was 90°, 126,67° at 6 months and 129,2° at 12 months for group B\r\n

## **Discussion**

#### Conclusion

The principal advantages of lengthening over and intramedullary nail include reduction of the time to keep the frame offering major tolerability and comfort for the patients, protects the regenerated bone from fractures, avoid joint rigidity and reduce the time necessary rehabilitation

# References

# Abstract: 324 - Date: 2019-07-15 06:58:48am

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# **Topic of Summary**

PRM in orthopaedics and musculoskeletal disorders

# **Title of Summary**

Distal humerus fractures treated with plates versus external fixation: comparison of clinical and rehabilitation outcomes

## **Keywords**

# **Authors**

Haridimos Tsibidakis1;Alexandros Farmakidis2; Artemisia Panou3; Luca Corti1; Marco Camagni1;Francesco Guerreschi1

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#### Introduction

Surgery of different fractures permits immediate bone alignment and early mobilization with good functional outcomes, compare rehabilitation outcomes of distal humerus fractures treated by plates and external fixator with mini-lag screws

#### Materials & Methods

The medical records of 25 patients with supra-intracondylar humerus fractures were reviewed retrospectively. In 15 (9 M: 6 F-mean age 68.1y Group A) reduction was obtained using K wire or mini screws and an external fixator was placed. In 10 (5 M: 5 F-mean age 60.4y Group B) fixation was obtained by locking compression plates. Clinical evaluation and X-rays were performed at 1,2,3,6 and 12 months. The Mayo Elbow Performance Index, VAS and final elbow ROM were used to evaluate functional outcomes.

#### Results

Complete bone healing was obtained in 52.2 days in Group A and in 94.5 days in Group B. Radial nerve palsy was recorded in 2 patients of Group A. Mean elbow flexion and extension were 112.4° and 16.3° in Group A, while 133° and 13.5° in the Group B respectively. The clinical outcomes using MEPI and VAS were similar in both groups (90-100 in 83% of the patients, 75-89 in 13% and <40 in 4%).

## Discussion

#### Conclusion

Surgical treatment of supra and intercondylar humeral fractures with an external fixator compared to plates and screws grants elbow stability with good clinical and radiological results. However, LCP allows anatomical reduction, elbow stability with better functional results, early mobilization and restores elbow's ROM even if periostal damage and prolonged immobilization are higher when compared to external fixator.

#### References

# Abstract: 329 - Date: 2019-07-15 12:50:46pm

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# **Topic of Summary**

Neurorehabilitation, spasticity

# **Title of Summary**

Characterization of aphasia in stroke patients in a hospital rehabilitation unit

# Keywords

aphasia; communication; stroke; rehabilitation

#### **Authors**

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#### Introduction

Characterize a sample of stroke patients admitted to a hospital rehabilitation unit regarding aphasia.

#### **Materials & Methods**

Selection of the files of all stroke patients admitted to a hospital rehabilitation unit in the years 2017-2018.\r\n\r\nCollection of data regarding: presence, type and severity of aphasia according to bedside screening at admission and evaluation using the Lisbon Aphasia Examination Battery (LAE); length of hospitalisation; Functional Independence Measure (FIM) at admission and discharge.

# Results

136 patients were included. 22.8% presented with aphasia according to bedside screening however, after applying the LAEA, only 19.1% were confirmed to have aphasia. There were also discrepancies in the aphasia types comparing to bedside screening with the most frequent incorrect diagnosis being motor transcortical. The most frequent type was Global (32.3%) and the least frequent was conduction (0%).\r\n\r\nAccording to LAEA scores, global aphasia presented with the most marked communication deficits while anomic presented with the least.\r\n\r\nAphasic patients were hospitalized for an average of 53.8 days and had an average FIM score of 51.2 at admission and 76.4 at discharge, compared to an average of 40.9 days of hospitalisation, 75.9 FIM score at admission and 93.1 at discharge for non-aphasic patients.

## **Discussion**

## Conclusion

Aphasia prevalence was according to the reported in the literature.\r\n\r\nAphasia was associated with worse functional outcomes and increased length of hospitalisation.\r\n\r\nThe degree of communication impairment varied with the type of aphasia.\r\n\r\nDiagnosis may be complicated by the presence of concomitant problems such as dysarthria or apraxia.\r\n\r\nObjective measures like the LAEA are useful for diagnosis and grading.

# References

# Abstract: 330 - Date: 2019-07-15 12:59:33pm

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## **Topic of Summary**

Neurorehabilitation, spasticity

# **Title of Summary**

Injected muscles and treatment goals for botulinum toxin use in a real-life post-stroke spasticity outpatient clinic

# Keywords

spasticity; goals; botulinum toxin; stroke; rehabilitation

# **Authors**

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#### Introduction

To describe treatment goals and target muscles for botulinum toxin (BTX) in a group of stroke patients.

#### **Materials & Methods**

Data retrieved from clinical files of all stroke patients treated in the spasticity clinic of a rehabilitation centre in 2017, regarding: injected muscles, toxin doses and treatment goals. Goals were grouped into 7 categories: pain/ discomfort, involuntary movements, range of motion, passive function, active function, cosmesis/ facilitation of therapy, mobility.

#### Results

126 post-stroke patients included (68.6% ischaemic, 31.4% haemorrhagic).\r\n46 different muscles targeted in a total of 1821 injections. We identified 66 different goal statements in\r\n665 individual treatment goals, concerning both upper and lower limbs.\r\nThe most frequently injected muscles were flexor digitorum superficialis (8.73%), gastrocnemius medialis and lateralis (7.85%), brachialis and flexor digitorum longus (6.53%).\r\nThe most chosen treatment goals were: decreasing associated reaction of elbow flexion (19.25%), decreasing claw toes during the stance phase of gait (9.47%), improving ankle control during swing phase of gait (7.67%), reducing shoulder pain (6.17%), facilitating placement of hand orthosis (5.11%).\r\nCategory wise: 35.8% of goals related to active function, 27.8% to involuntary movements, 16.8% to pain/ discomfort, 9.2% to passive function, 6.0% to cosmesis/ facilitation of therapy and 4.4% to range of motion.

# **Discussion**

# Conclusion

The most frequently chosen goals related to active function, mainly aiming for improvement of gait, followed by reducing associated reaction of elbow flexion. Most frequently injected muscles were the ones most involved in the above mentioned goals, which corroborates our philosophy of patent centred and goal oriented intervention.

# Abstract: 331 - Date: 2019-07-15 13:02:34pm

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# **Topic of Summary**

PRM in paediatric problems

# **Title of Summary**

Thirteen years of experience with biologic drugs in patients with juvenile idiopathic arthritis

# **Keywords**

juvenile idiopathic arthritis, biologic drugs, outcome

#### **Authors**

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#### Introduction

to assess efficacy and safety of treatment of biologics in children suffering from JIA.

#### **Materials & Methods**

Retrospective study included 180 patients (F/M 121/59) treated with biologics from 2006-2018. in Institute of Rheumatology Belgrade.

#### Results

The most of patients were treated with etanercept 148 (82,2%), 61 (33,9%) adalimumab, 26 (14,4%) tocilizumab, 4 infliximab, 2 golimumab, 1 rituximab and 1 anakinra. 47 (26,1%) pts, had to be switched to another drug because of inefficacy or adverse event. At the last visit 111 (61,7%) pts. were in remission on drug, 28 (15,6%) remission without drug, 27 (15%) were active, for 13 (7,2%) outcome was unknown. Relapse was most common in patients with extended oligo 31,1% pts. and 26,2% pts. with RF neg. pJIA. Serious adverse events during observation period recorded: cerebrovascular event, toxic hepatitis, active TBC, exitus, perianal abscess, scarlatina, pneumocystis carini pneumonia. During 13 yrs. of treatment 10 (5,6%) developed uveitis de novo (all treated with etanercept). Three patients got new autoimmune diseases: psoriasis, inflammatory bowel disease, lupus like syndrome.

### **Discussion**

# Conclusion

Biologics exhibited high level of efficacy in suppression of inflammation and reaching remission in JIA patients. Children with extended oligo JIA most frequent relapsed. It is necessary carefully long lasting following the patients because of potentially development serious adverse events or new autoimmune diseases.

# Abstract: 333 - Date: 2019-07-15 14:55:09pm

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# **Topic of Summary**

PRM in paediatric problems

# **Title of Summary**

Childhood disability in Morocco

# **Keywords**

Childhood, disability, Morocco, prevalence

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# Introduction

This research aims to describe the epidemiological profile of the child\'s disability in Morocco

#### **Materials & Methods**

A descriptive cross-sectional multicenter study was conducted from March 2015 to May 2018. 559 children with different causes of disability were included in our study.

#### Results

The average age of our population is of average age of 9 +/- 4.98. The male sex is predominant in 60%.\r\nThe causes of childhood disability are dominated by cerebral palsy (33.1%), followed by trisomy (15.2%), mental retardation (14.3%) and autism (13.8%).\r\nThe most common types of disability are motor impairment (49.2%), intellectual disability (30.6%), cognitive impairment (15.2%), sensory impairment (4.3%) and lastly polyhandicap (0.7%).

# **Discussion**

# Conclusion

it is urgent to develop the rehabilitation services specialized in the pediatric rehabilitation in the different networks and levels of care of the Moroccan health system with the creation of poles of excellence by type of disability and disease the most currents.

# Abstract: 334 - Date: 2019-07-15 15:31:17pm

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# **Topic of Summary**

Sports injury rehabilitation

# **Title of Summary**

Epidemiology of shoulder injuries in young elite archers

# **Keywords**

archery, shoulder injuries, teenagers, prevention

### **Authors**

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#### Introduction

Main objective of this study was to assess the prevalence of shoulder pain among young athletes exposed to high intensity training in archery.

#### **Materials & Methods**

This is a cross-sectional epidemiological study performed in the city of Patras, Greece, during the European Youth Championship (EYCh2018-Patras). Data were collected using a structured questionnaire administered by four interviewers (physiotherapists) in order to explain any question, if necessary. Questionnaire consists of a number of questions including demographics, the presence, duration, frequency, and intensity of pain as measured by the visual analogue scale (VAS), and the need of medication or physiotherapy. Additionally, information on duration, frequency, and intensity of training, years of competitive experience and number of competitions per year were also obtained by the questionnaire.

#### Results

200 young archers (104 males - 96 females) from 34 countries were participated. The mean age of the participants was 16.9 years old (SD=1.7), with 6.5 years (SD=2.8) of mean competitive experience and the mean number of 11.7 competitions per year (SD=13.3). 43.5% (87/200) experienced shoulder pain while training, 30% needed medications in order to be able to train, 52.3% used physiotherapy and 31.8% had to stop training due to injury. Mean pain duration was 3,9 months (SD 12.6) and mean pain intensity was 5.94 (SD 6.1).

#### **Discussion**

# Conclusion

Due to anatomy and biomechanical demands, shoulder injuries are a common occurrence in arching even in teenagers. The appraisal of this epidemiologic information by clinicians should contribute to the design of sport specific training and prevention programs.

# Abstract: 337 - Date: 2019-07-15 18:53:58pm

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# **Topic of Summary**

Neurorehabilitation, spasticity

# **Title of Summary**

Sport, a pathway for reintegration of post-traumatic paraplegics

## **Keywords**

Spinal cord injury, disability, reintegration, rehabilitation, sport

## **Authors**

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# Introduction

Despite the progress in the field of sport for the disabled persons, many Tunisian paraplegics do not exercise physical activity; what are the main reasons?

# **Materials & Methods**

Prospective descriptive study 3 months in 2019 of the the profile of a population of Tunisian post-traumatic paraplegics <T5 in wheel chair facing the practice of physical and sports activities.\r\nAssessment by questionnaire (socio-family characteristics, the date of the attack and the cause of the paraplegia, the previous sporting level and the interest of the interviewee for the sport as well as the possible obstacles), ASIA, Ashworth, FIM , MOS SF36\r\n

# Results

30 subjects, mean age 28 years, 26 singles, 1 year 1 / 2 -6 years evolution of SCI, no return to work for 28 cases, 65% no sports practice before.\r\nAll the parameters were better in 15 sports paraplegics than in 15 non-athletes (FIM 122.4 / 95.73, MOS SF36 93.78 / 41.84).

## **Discussion**

# Conclusion

Sport is useful in the acquisition of autonomy, functional independence, improvement of quality of life, achievement of psychic balance and reintegration in acquired disabilities.

#### References

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# Abstract: 340 - Date: 2019-07-15 20:04:22pm

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# **Topic of Summary**

Special body function problems e.g. spasticity, urinary system, sexuality, dysphagia, speech disorders and others

### **Title of Summary**

Modalities of the therapeutic education of urinary and anorectal disorders in a Tunisian rehabilitation department

# **Keywords**

therapeutic education- intermittent catheterization-anorectal disorders

## **Authors**

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# Introduction

The hospitalization of patients with neurological disorders in physical medicine department allows a multidisciplinary assessment including urinary disorders (UD) and anorectal disorders (ARD) .The aim of this study was to show the modalities of therapeutic education (TE) for these disorders.

## **Materials & Methods**

Prospective study focused on hospitalized patients in a tunisian Physical between September and December 2018 including patients hospitalized for neurological diseases with UD and ARD. For each patient, we have established therapeutic education.

#### Results

We included 28 patients divided into 3 groups:Group1: 10 patients with a mean age 39.7 years, sex ratio 2.33 and disorders evolving since 2.5 months. All patients were under indwelling catheter and had Bristol score 2.2.Intermittent catheterization was performed with acceptability in 8 cases.\(\text{lr\nGroup}\) 2:13 patients middle age 40 years, sex ratio 1.16 and disorders evolving since 7 years. The daily exoneration was applied by 5 patients. The UD and ARD stopped leisure in 9 cases. The use of antiseptics was noted in 4 cases. Group 3: 5 children aged 14.4 years and disorders since 5 years. All were wearing diapers and were under intermittent hetero catheterization. The brake to the practice of self intermittent catheterization was the lack of knowledge of the anatomy in 2 teenage girls.

#### Discussion

#### Conclusion

TE in hospitalized patients allows a global and multidisciplinary approach according to international guidelinss. The barriers to TE must be identified and treated according to the clinical and social context.

## References

# Abstract: 341 - Date: 2019-07-15 20:10:28pm

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# **Topic of Summary**

PRM and oncologic patients

# Title of Summary

Physical Medicine and Rehabilitation Intervention in a Haematology Unit

## **Keywords**

Immobilization syndrome; Bed rest; Functional capacity; Haematology malignancy; Rehabilitation

#### **Authors**

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#### Introduction

Immobilization syndrome has extremely important and negative impact on patient's functional capacity, particularly in vulnerable patients such as patients with haematological pathology. Most of the patients admitted at our haematology department have haematological malignancy and reasons for hospitalization vary between cycles of induction chemotherapy

(which are responsible for periods of hospitalization around 30 days), consolidation chemotherapy and other events affecting the clinical status of the patient. In order to prevent immobilization syndrome all patients admitted at the haematology department are evaluated by a Physical and Rehabilitation Medicine Physician and those at higher risk of immobilization syndrome are included in Rehabilitation Programs during the hospitalization time.

#### **Materials & Methods**

Retrospective analysis of all patients admitted at the Haematology department included in Rehabilitation Programs, from January to December 2018, regarding age, diagnosis, hospital length of stay and number of days until the start of the Rehabilitation Program.

#### Results

During the year 2018, 555 patients were admitted at the Haematology department and mean hospital length of stay was 15 days. From these patients, 334 (60%) were included in Rehabilitation Programs.

## Discussion

### Conclusion

Prolonged bed-rest and immobilization effects are well-known and have high impact in morbidity and mortality among patients who are hospitalized. Deleterious effects of prolonged bed rest in patients are independent of the factors associated with the hospitalization, and include loss of strength, aerobic capacity and a reduction in physical activity. Rehabilitation Programs, specially including physical therapy, present as a useful tool in preventing immobilization complications.

### References

# Abstract: 348 - Date: 2019-07-15 22:51:40pm

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## **Topic of Summary**

Cardiovascular and pulmonary prevention and rehabilitation

# **Title of Summary**

Pulmonary Functions and Health-Related Quality of Life among Silica-Exposed Workers In

# Keywords

Pulmonary Functions, Health-Related Quality of Life, Silica-Exposed Workers, Morocco

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#### Introduction

Silicosis is a fibrosing and irreversible lung disease. Currently, 1470 living silicosis in Morocco in 2018 and more people working in underground mines. The aims of this study were to evaluate the influence of the patients' functional capacity on subjective well-being (SWB) and quality of life (QOL), provide the scientific basis for further intervention measures, and improve their health status.

## Materials & Methods

A cross-sectional design was used for this study. We investigated 147 patients with silicosis during March 2018 to September 2018. The 6-minute walk test (6MWT) and sit-to- stand test (SST)) were the major methodology used to evaluate the functional capacity, the St. George's Respiratory Questionnaire (SGRQ) to evaluate the QOL.

#### Results

In Morocco, patients with silicosis had low QOL with average of total Saint George score (SGT) at 68.02 +/- 19.54% . The distance of 6MWT suggested a significant and positive correlation with QOL of patients with silicosis.

### Discussion

# Conclusion

The QOL of patients with silicosis is still relatively low and their health status needs improvement. A pulmonary rehabilitation program must be set up very quickly to improve their well-being.

### References

# Abstract: 350 - Date: 2019-07-15 22:59:43pm

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# **Topic of Summary**

Cardiovascular and pulmonary prevention and rehabilitation

# **Title of Summary**

attitude and practice of physiotherapists towards Promoting phys- ical activity for people with cardiovascular disability

# Keywords

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#### Introduction

This qualitative study explored the Knowledge, attitude and practice of physiotherapists in Morocco toward promoting physically active recreation for adults with cardiovascular disease.

## **Materials & Methods**

A cross-sectional study design was used and an online survey questionnaire was created with 20- item which collected information on physical activity promotion in physiotherapy practice. 145 Moroccan practicing physiotherapists from various public and private hospitals were included.

#### Results

There were 94 respondents, 34% in public hospitals and 39% are men. 95% of respondents never studied physical activity as part of their initial physiotherapy training and only 5% of respondents have ever received continuing education in physical activity. 82% of respondents have already rehabilitated patients suffering from cardiovascular pathologies and still without a medical prescription of physical activity. 53% of our population are strongly agreed with the statement & # 171; physical activity is a therapeutic agent and acts as a drug& # 187; and 66% agree on the effectiveness of physical activity in patients with cardiovascular disorders. 89% of physiothera- pists confirm that there is a lack of knowledge of cardiac rehabilitation and all participants want to introduce a physical activity module in the physiotherapists' initial training curriculum.

# Discussion

## Conclusion

we report poor understanding and knowledge of PA recommendations, and physiotherapists' knowledge seems insufficient to inform and encourage cardiovascular patients to use the AP.\r\nA specific module on PA and Cardiovascular Rehabilitation is needed in the initial education and training of physiotherapists.

# Abstract: 353 - Date: 2019-07-15 23:28:17pm

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# **Topic of Summary**

Neurorehabilitation, spasticity

# **Title of Summary**

Rehabilitation in ALS - Survival analysis

# **Keywords**

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### Introduction

Amyotrophic lateral sclerosis (ALS) is a rare degenerative motor neuron disease associated with significant disability. The main goal in the management of ALS is to provide clinical and functional support to prolong survival and ameliorate quality of life. The impact of rehabilitation programs in ALS is not completely clear. We aim to evaluate the overall survival of ALS patients' and the potential impact of rehabilitation programs.

# **Materials & Methods**

We retrospectively reviewed health records of ALS patients followed at a Neurology Department in the northeast region of Portugal for the 2005-2017 period. Data were analysed with SPSS 25.0. Relevant clinical information was collected for survival analysis using Kaplan-Meier and Cox regression.

# Results

75 ALS cases were identified in the studied period. Information regarding symptom onset was only available for 62 (83%) patients. The overall median survival from symptom onset was 1142 days. Bulbar ALS cases presented a median survival from symptom onset of 912 days vs. 1708 days in the spinal cases (p=0.004). Survival did not statistically differ between rehabilitation and non-rehabilitation groups. Overall post rehabilitation median survival was 1322 (95%CI:628,560-2015,440] days. Both LogRank test and Cox regression using ALS subtype (bulbar and spinal cases) as covariate did not show significant results regarding post rehabilitation survival (p=0.657; HR=0.910 [95%CI: 0.324-12.552], p=0.113; respectively).

# Discussion

## Conclusion

Rehabilitation intervention did not impact ALS survival in our study. However, our analysis is limited by the small sample size. Studies with more participants and better data quality are required to estimate the possible impact of rehabilitation in ALS.