Indian Journal of
Physical Medicine and Rehabilitation

IJPMR | Archives | IJPMR 2013 Jan; 24 (Suppl)

IJPMR 2013 Jan; Volume 24 (Supplement)

IAPMRCON 2013: Abstracts

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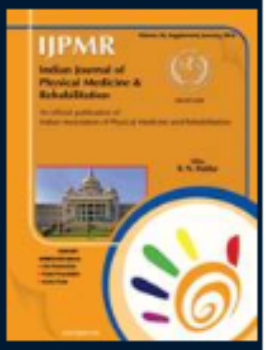

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Editor:
Prof RN Haldar

ISSN
0973-2209

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Web administration and designing: Dr U Singh. *First built:* April 15, 2004. *Last updated:* January 22, 2013

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Ipsilateral hemiplegia caused by an infarct in the temporo-occipital region: A case report

Mohes A S

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Anesthetic feet and self mutilation in a child – A diagnostic dilemma

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Ankylosing spondylitis with muscle involvement – A case report

Touthang Alex Thangjalet, Naorem Bimol, Singh Y Nandabir

Case: A 38 yrs old male reported to PMR Department, RIMS with complain of pain in both the hip, knee and shoulder for the past 6 months. There was history of low back pain with stiffness which was relieved by activities. On examination chest expansion was 2cm, decreased mobility of lumbar spine, tender sacroiliac joints, wasting of both supraspinatus, right deltoid muscle was noted. There was no significant family history. Laboratory investigations reveals HLA-B27 positive. Needle EMG, nerve conduction test and muscle biopsy of the affected muscles were normal. Radiologicaly erosion of the sacroiliac joints was noted. MRI Cervical spine was normal. Based on clinical examination and investigations, we diagnosed him as a case of ankylosing spondylitis

Patient was started on sulfasalazine along with exercise programme and at followed up after 3 months there was significant improvement in both pain and function.

Conclusion: Muscle involvement in ankylosing spondylitis is a rare occurrence. The presence of muscle atrophy can misled the diagnosis and delay the initiation of appropriate therapy. Possible explanation for the unusual muscle atrophy of this patient could be radiculitis with involvement of paravertebral muscle and partly due to inactivity.

Keywords: ankylosing spondylitis, muscle atrophy.

P21

Outcomes in paraplegics of different etiologies –A cross-sectional study

Sumalatha K B

Spinal cord lesion affects small but significant portion of population. One of the most difficult tasks is to assess the prognosis in the different types of paraplegias. There have been many studies looking at different outcomes in various types of paraplegia but only a few comparing the outcomes between each other. This study aims to know and compare the outcomes with respect to neurological and clinical improvement or worsening in paraplegias of different etiologies. We did a cross-sectional study on paraplegias of various etiologies like traumatic, transverse myelitis, Potts paraplegias etc. We assessed OPD patients who attended Dept of PMR, AIIMS and also those who were admitted as inpatients in PMR IPD with a minimum duration of one year after the onset of paraplegia. We also tried to assess the difference in the outcomes in those who were rehabilitated and those who were not. In our study we noted that the outcome varies with respect to different etiologies of paraplegias.

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Challenges in managing a dyskinetic CP in rural setting –A case report

Francis Shigy, Jose Naveen Mathew, Sankaranarayanan H

Introduction: Cerebral palsy is common, affecting about 2-3 per 1000 children. These children may have a motor disorder characterised by spasticity, dystonia or both. This can result in significant difficulty with activities of daily living, pain and long term joint deformity.

Case Discussion: 12 year old Dinesh presented with dystonic movements of the left arm and leg and significant delay in developmental milestones from early infancy five year back.

Challenges we faced in the last five years:
Medical:

- Difficulty in controlling dystonia with medical and therapeutic interventions
- Chronic malnutrition
- Dependency in ADL and mobility

Social:

- Abandoned child
- Rural setting
- Environmental barriers schooling

Conclusion: Rehabilitation in a rural area is challenging because of these underlying causes; lack of barrier free environment, malnutrition, poor educational facility, lack of income generating activities and economical issues. In spite of these challenges currently he is able to walk independently for about 10-15 feet. He can use his toes to grasp a pencil and small objects when seated. He is studying in a formal school in 5th Standard. And he is attended by an outreach programme once in month.

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Microbiological profile of urinary tract infection (UTI) in spinal cord injured persons in a tertiary care centre–A retrospective study

Sankaranarayanan H, Jose Naveen Mathew, Zachariah Kurian, Hariharan Rajalakshmi, Francis Shigy

Objective: To identify the microbiological profile of UTI in spinal cord injured persons to help guide empirical antibiotic therapy

Setting: Dept of PMR, St. Johns Medical College Hospital, Bangalore

Study design: Retrospective analysis

Methods: Information was collected from discharge summaries ofpersons with SCI admitted from January 2010 to September 2012

Conclusion: The commonly isolated organisms were *E. coli*, *Klebsiellaspp*, *Pseudomonas spp* and *Proteus sp*..The antibiotic sensitivity noted from the reports were not leading toany definite inferences in the subjects studied. An attempt is made to identify any possible prognosticating factors which could lead us to predict which set of patients are/will be prone to develop such infections, thereby helping us even to take preventive steps. There is a strong need for rehab experts to concertedly attack this menace in SCI population in order to improve the quality of life in such persons.

P24

Musculoskeletal manifestations of neurofibromatosis–A report of four cases

Yadav G, Gupta A K, Agarwal A K, Sharma V P, Kumar Dileep

Dept of PMR, King George's Medical University, Lucknow, India

The neurofibromatosesare autosomal dominant diseases that have widespread effects on ectodermal and mesodermal tissue, the commonest being neurofibromatosis type I (NF I) which is a multi-system disease caused by mutations in the NF1 gene encoding a RAS-GAP protein, neurofibromin, which negatively regulates RAS signaling. Besides neuro-ectodermal malformations and tumors, the skeletal system is often affected (e.g. scoliosis and long bone dysplasia) demonstrating the importance of neurofibromin for development and maintenance of the musculoskeletal system.

We are presenting four cases of neurofibromatosis with different musculoskeletal complications like deformities, scoliosis, flat foot, tibia vara, pseudoarthrosis of tibia, subluxation of hip and knee, plexiform neurofibromatosis involving lower extremities and discuss their relevance to the clinicians. This disorder being inheritable, genetic counseling of individuals must include these manifestations and complications. The relentless progressive nature of disease has a significant toll on the quality of life of affected patients throughout their lives and necessitates close observation due to the possibility of modulation with further growth.

P25

Myositis ossificans circumscripta–A case report

Neyaz Osama[1], Ghosal Vasundhara[2], Jhalani R[3], Equebal Ameed[4], Keshkar S[5], Ballav Ambar[6]

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[6]Retd. Prof. & Head-PMR, IPGMER, Kolkata

Introduction: Myositis ossificans circumscripta (MOC) is a form of Heterotopic ossification that is benign in nature but may appear clinically and radiologically as a malignant neoplasm.Heterotopic ossification (HO) is most commonly associated with musculoskeletal trauma, central nervous system disorders or injuries, severe burns, and elective surgery such as total hip arthroplasty. The clinical signs of HO include increased joint stiffness, limited range of motion, warmth, swelling and erythema.

Case presentation: A 26 year old male patient of traumatic spastic paraplegia, secondary to compression fracture of D8-D10 level. Presented with sever LBP more around right buttock with right hip movements. During investigations, the presence of large, right-sided pelvic Heterotopic ossification was noted. Diagnosis was confirmed by blood investigations, x-rays, MRI. Malignancy was excluded by bone biopsy. Case was managed conservatively, the orthosis was changed.

Conclusion: Patient was discharged in early july 2012 with significant improvement in pain (VAS-1) & ROM of hip with proper counselling to patient, caregivers and necessary advice for resettlement.

Keywords: Heterotopic ossification, Myositis ossificans circumscripta; gluteal region, traumatic, changed orthosis.

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Deltoid paralysis following herpetic axillary nerve neuropathy–A case report

Hmingthanmawii[1], Zonunsanga C[1], Singh N Romi[2]

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Herpes zoster infection causing motor neuropathy is rare, and axillary nerve involvement in such infection is rarely reported. Here we reported a case of deltoid paralysis following herpetic axillary nerve neuropathy. A 35 year old male come with a complaints of weakness of right arm and painful rash on right arm. On examination there was dried vesiculo-erythematous rash/scar on right upper limb extending from the lateral side upper arm to dorsal aspect of forearm. Motor power of deltoid was 1/5, other muscles around the shoulder were normal. Active abduction and flexion of shoulder were limited to 15°. He was advised to take pharmacological support and to undergo regular shoulder ROM exercise and put on electrical stimulation for deltoid muscle, and to support shoulder with sling support. In a serial follow up there is a good improvement with motor recovery and the possible common complication like shoulder subluxation and muscle disused atrophy are avoided.

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Mohes A S

Hemiplegia is one of the commonest cases admitted in Physical Medicine and Rehabilitation (PMR) ward. A 67 years old right-handed male patient was admitted with weakness of right upper limb and lower limb and deviation of mouth towards left side. Patient was diagnosed as a case of ipsilateral hemiplegia and in the plain CT scan an infarct was seen at right temporo-occipital cerebral cortex. This case report is unique because ipsilateral hemiplegia with same sided lesion in brain is a rare phenomenon. Only few cases had been reported and those cases were mainly affected from recurrent attacks of stroke. The mechanism of such phenomenon is also still not understood.

P19

Anesthetic feet and self mutilation in a child – A diagnostic dilemma

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We are presenting a case of anesthetic feet with self-mutilation which was really a diagnostic challenge. A8 years male child, came to our OPD with chief complaint of Non healing plantar ulcer in right foot since he started walking and loss of toes.Patient was seen by several dermatologists and was diagnosed as a case of Hansen's disease and was treated with full course of MDT without any relief.Then the child attended our OPD and we found there was no evidence of Hansen' disease and patient had anesthetic feet with plantar ulcer and had smell of urine. Clinically there was no evidence of meningomyelocele, so patient was investigated for central cause. Thyroid profile, S.uric acid, Vit B12 was within normal limit. MRI Spine showed Pachyarachadonitis with myelopathic changes in dorsal spinal cord resulting in syringohydromyelia. Management of Plantar Ulcer was done by Off-loading and Behavioural modification and medication was done as advised by Child Psychiatrist. Long term care of anaesthetic feet was explained and counselling was done. Take home message is that In case of planar ulcer with anesthetic feet with bladder involvement we should think of mengigomyelocele and other causes like syringomyelia.

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Ankylosing spondylitis with muscle involvement – A case report

Touthang Alex Thangjalet, Naorem Bimol, Singh Y Nandabir

Case: A 38 yrs old male reported to PMR Department, RIMS with complain of pain in both the hip, knee and shoulder for the past 6 months. There was history of low back pain with stiffness which was relieved by activities. On examination chest expansion was 2cm, decreased mobility of lumbar spine, tender sacroiliac joints, wasting of both supraspinatus, right deltoid muscle was noted. There was no significant family history. Laboratory investigations reveals HLA-B27 positive. Needle EMG, nerve conduction test and muscle biopsy of the affected muscles were normal. Radiologicaly erosion of the sacroiliac joints was noted. MRI Cervical spine was normal. Based on clinical examination and investigations, we diagnosed him as a case of ankylosing spondylitis

Patient was started on sulfasalazine along with exercise programme and at followed up after 3 months there was significant improvement in both pain and function.

Conclusion: Muscle involvement in ankylosing spondylitis is a rare occurrence. The presence of muscle atrophy can misled the diagnosis and delay the initiation of appropriate therapy. Possible explanation for the unusual muscle atrophy of this patient could be radiculitis with involvement of paravertebral muscle and partly due to inactivity.

Keywords: ankylosing spondylitis, muscle atrophy.

P21

Outcomes in paraplegics of different etiologies –A cross-sectional study

Sumalatha K B

Spinal cord lesion affects small but significant portion of population. One of the most difficult tasks is to assess the prognosis in the different types of paraplegias. There have been many studies looking at different outcomes in various types of paraplegia but only a few comparing the outcomes between each other. This study aims to know and compare the outcomes with respect to neurological and clinical improvement or worsening in paraplegias of different etiologies. We did a cross-sectional study on paraplegias of various etiologies like traumatic, transverse myelitis, Potts paraplegias etc. We assessed OPD patients who attended Dept of PMR, AIIMS and also those who were admitted as inpatients in PMR IPD with a minimum duration of one year after the onset of paraplegia. We also tried to assess the difference in the outcomes in those who were rehabilitated and those who were not. In our study we noted that the outcome varies with respect to different etiologies of paraplegias.

P22

Challenges in managing a dyskinetic CP in rural setting –A case report

Francis Shigy, Jose Naveen Mathew, Sankaranarayanan H

Introduction: Cerebral palsy is common, affecting about 2-3 per 1000 children. These children may have a motor disorder characterised by spasticity, dystonia or both. This can result in significant difficulty with activities of daily living, pain and long term joint deformity.

Case Discussion: 12 year old Dinesh presented with dystonic movements of the left arm and leg and significant delay in developmental milestones from early infancy five year back.

Challenges we faced in the last five years:
Medical:

- Difficulty in controlling dystonia with medical and therapeutic interventions
- Chronic malnutrition
- Dependency in ADL and mobility

Social:

- Abandoned child
- Rural setting
- Environmental barriers schooling

Conclusion: Rehabilitation in a rural area is challenging because of these underlying causes; lack of barrier free environment, malnutrition, poor educational facility, lack of income generating activities and economical issues. In spite of these challenges currently he is able to walk independently for about 10-15 feet. He can use his toes to grasp a pencil and small objects when seated. He is studying in a formal school in 5th Standard. And he is attended by an outreach programme once in month.

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Microbiological profile of urinary tract infection (UTI) in spinal cord injured persons in a tertiary care centre–A retrospective study

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Setting: Dept of PMR, St. Johns Medical College Hospital, Bangalore

Study design: Retrospective analysis

Methods: Information was collected from discharge summaries ofpersons with SCI admitted from January 2010 to September 2012

Conclusion: The commonly isolated organisms were *E. coli*, *Klebsiellaspp*, *Pseudomonas spp* and *Proteus sp*..The antibiotic sensitivity noted from the reports were not leading toany definite inferences in the subjects studied. An attempt is made to identify any possible prognosticating factors which could lead us to predict which set of patients are/will be prone to develop such infections, thereby helping us even to take preventive steps. There is a strong need for rehab experts to concertedly attack this menace in SCI population in order to improve the quality of life in such persons.

P24

Musculoskeletal manifestations of neurofibromatosis–A report of four cases

Yadav G, Gupta A K, Agarwal A K, Sharma V P, Kumar Dileep

Dept of PMR, King George's Medical University, Lucknow, India

The neurofibromatosesare autosomal dominant diseases that have widespread effects on ectodermal and mesodermal tissue, the commonest being neurofibromatosis type I (NF I) which is a multi-system disease caused by mutations in the NF1 gene encoding a RAS-GAP protein, neurofibromin, which negatively regulates RAS signaling. Besides neuro-ectodermal malformations and tumors, the skeletal system is often affected (e.g. scoliosis and long bone dysplasia) demonstrating the importance of neurofibromin for development and maintenance of the musculoskeletal system.

We are presenting four cases of neurofibromatosis with different musculoskeletal complications like deformities, scoliosis, flat foot, tibia vara, pseudoarthrosis of tibia, subluxation of hip and knee, plexiform neurofibromatosis involving lower extremities and discuss their relevance to the clinicians. This disorder being inheritable, genetic counseling of individuals must include these manifestations and complications. The relentless progressive nature of disease has a significant toll on the quality of life of affected patients throughout their lives and necessitates close observation due to the possibility of modulation with further growth.

P25

Myositis ossificans circumscripta–A case report

Neyaz Osama[1], Ghosal Vasundhara[2], Jhalani R[3], Equebal Ameed[4], Keshkar S[5], Ballav Ambar[6]

[1]2nd year DNB PGT, [2]2nd year DNB PGT, [3]Asst. Director (Services), [4]Asst. Director (Training), NIOH, Kolkata
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Introduction: Myositis ossificans circumscripta (MOC) is a form of Heterotopic ossification that is benign in nature but may appear clinically and radiologically as a malignant neoplasm.Heterotopic ossification (HO) is most commonly associated with musculoskeletal trauma, central nervous system disorders or injuries, severe burns, and elective surgery such as total hip arthroplasty. The clinical signs of HO include increased joint stiffness, limited range of motion, warmth, swelling and erythema.

Case presentation: A 26 year old male patient of traumatic spastic paraplegia, secondary to compression fracture of D8-D10 level. Presented with sever LBP more around right buttock with right hip movements. During investigations, the presence of large, right-sided pelvic Heterotopic ossification was noted. Diagnosis was confirmed by blood investigations, x-rays, MRI. Malignancy was excluded by bone biopsy. Case was managed conservatively, the orthosis was changed.

Conclusion: Patient was discharged in early july 2012 with significant improvement in pain (VAS-1) & ROM of hip with proper counselling to patient, caregivers and necessary advice for resettlement.

Keywords: Heterotopic ossification, Myositis ossificans circumscripta; gluteal region, traumatic, changed orthosis.

P26

Deltoid paralysis following herpetic axillary nerve neuropathy–A case report

Hmingthanmawii[1], Zonunsanga C[1], Singh N Romi[2]

[1]2nd year PG trainee; [2]Associate professor
Dept of PMR, RIMS, Imphal

Herpes zoster infection causing motor neuropathy is rare, and axillary nerve involvement in such infection is rarely reported. Here we reported a case of deltoid paralysis following herpetic axillary nerve neuropathy. A 35 year old male come with a complaints of weakness of right arm and painful rash on right arm. On examination there was dried vesiculo-erythematous rash/scar on right upper limb extending from the lateral side upper arm to dorsal aspect of forearm. Motor power of deltoid was 1/5, other muscles around the shoulder were normal. Active abduction and flexion of shoulder were limited to 15°. He was advised to take pharmacological support and to undergo regular shoulder ROM exercise and put on electrical stimulation for deltoid muscle, and to support shoulder with sling support. In a serial follow up there is a good improvement with motor recovery and the possible common complication like shoulder subluxation and muscle disused atrophy are avoided.

a busy OPD. Timely identification with appropriate radiological investigation and treatment can prevent development of significant neurological deficits.

Key words: Back pain, Intradural lipoma, MRI, Spinal cord malformation (SCM).

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Conclusion: Rehabilitation in a rural area is challenging because of these underlying causes; lack of barrier free environment, malnutrition, poor educational facility, lack of income generating activities and economical issues. In spite of these challenges currently he is able to walk independently for about 10-15 feet. He can use his toes to grasp a pencil and small objects when seated. He is studying in a formal school in 5th Standard. And he is attended by an outreach programme once in month.

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Keywords: Deltoid paralysis, herpes zoster infection, axillary nerve neuropathy, shoulder subluxation

P27

Demographic profile of patients with traumatic spinal cord injury admitted in tertiary care rehabilitation centre

Zonunsanga C, Chanu Asem Rangita, Hmingthanmawii, Pertin Minggam, Singh N Romi

Objective: To identify the demographic profile of patients with spinal cord injury(SCI) admitted in tertiary care rehabilitation centre

Study design: Retrospective descriptive study

Study duration: 1/10/11 to 30/09/12

Setting: PMR Department, RIMS, Imphal

Methods: Profiles of patients with traumatic SCI admitted in PMR ward RIMS were recorded using a structured proforma and analysed

Results: Among all 22 patients, 95.5% are male. The mean age is 40.41 ±15.1 years. Mean duration between date of injury and admission is 46.77±32.66 and median is 34.50(9-132) days. Mean duration of hospital stay is 44.82±61.63 and median is 20.50 (5-258) days. 72.7% are tetraplegics, C5 (59.09 %) is the most common neurological level. Fall from height is most common (50%) mechanism of injury, 36.4 % are RTA and 13.3% are direct hit on spine.63.6% of patients develop pressure sore and sacrum (78.57%) is the most common site. 27.3% of patients were treated with surgical operation before admission. 63.6 % had UTI.72.7% of patients had varying degree of spasticity. 54.5 % are ASIA grade A. 71.50 is the mean FIM score. Only 22.7 % underwent urodynamic study and all had hyperactive detrusor.

Conclusion: Majority of patients were male tetraplegics with fall from height as most common cause. More than half of patients had pressure sore and spasticity. Complete injury is commoner.

Keywords: spinal cord injuries, pressure sore, ASIA grade, spasticity, FIM score

P28

Organisms isolated from urine samples of traumatic spinal cord injury inpatients in a tertiary hospital and their antibiogram: a retrospective study

Chanu Asem Rangita, Zonunsanga C, Hmingthanmawii, Pertin Minggam, Singh N Romi

Objectives: To determine the antibiotic sensitivity of urine amongst traumatic spinal cord injury inpatients during admission in a tertiary hospital at Imphal

Study Design: A Retrospective Descriptive Study

Setting: Department of Physical Medicine and Rehabilitation, RIMS, Imphal

Study Duration: 1st January 2012 to 31st October 2012

Materials and Methods: All the traumatic spinal cord injury inpatients whose urine were sent for urine culture and sensitivity during admission were included in the study. There were a total of fifteen such patients. Urine culture revealing a bacterial colony count of 10^5 colony forming units (cfu)/ml was taken as significant bacteriuria.

Results: Of all 15 patients, 13(86.7%) patients had significant bacteriuria showing only Gram negative bacteria and 2(13.3%) patients had sterile urine. All the positive urine samples showed growth of only single bacteria except in 1(6.7%) patient. The most common organism isolated was E. coli which was found in 8(53.3%) urine samples. This was followed by 1(16.7%) each for Klebsiella, Klebsiella with Pseudomonas, Pseudomonas, Providentia and Enterobacter. All the organisms were sensitive to imipenem and resistant to trimethoprim-sulphamethoxazole.

Conclusion: OnlyGram negative bacteria were isolated from the urine samples of traumatic Spinal Cord Injury inpatients of PMR, RIMS, Imphal with E coli as the most common organism. All the isolates were found to be sensitive to imipenem and again all were resistant to trimethoprim-sulphametoxazole.

Keywords: significant bacteriuria, antibiogram

P29

Prevention of disability in trauma

Singh Nirankar

Nature of trauma and the type of disability which occurs as a direct consequence of it has been changing since the human being has come into existence. The trauma to the spine is one of the most disabling of the trauma disease.

The incidence and the type of primary disability is often a reflection of contemporary life style of the society. For thousands of years, the simple society of ours, presented a few and simple injuries due to trauma. Now we have enriched our lives through technology and increased the risk to trauma disease thousands times

The endless drive for more and more products, speed, power, comforts and leisure has created more severe problems and disabilities due to trauma disease.

Rehabilitation care includes preventive and therapeutic

The belief that Rehabilitation should commence after the termination of specific treatment, is the basis for classifying rehabilitation at tertiary level of prevention, is regretfully wide spread but obviously is a misconception.

The fact that injury to spine is no exception in getting traumatized in today's scenario of complex trauma, where the consequences of spinal injury are much more grave and disabling to the individual and the health of the nation. Therefore we must make every effort to prevent this disabling trauma disease for the better present and future health of the nation and its citizens.

Trauma rehabilitation aims at preventing trauma disease, there by trying to prevent primary disability there by preventing the secondary disability altogether in the best interest of man kind.

P30

Normal electrodiagonostic study is helpful to diagnose lumbosacral radiculopathy

Kataruka Mohit[1], Pramanik R[2], Halder R N[3]
[1]MD PGT, [2]Assist Prof, [3]Prof & HOD
Dept of PMR, IPGMER, Kolkata

Introduction: In current scenario of physiatric practice, electrodiagonosis is an important tool to establish different types of neurological condition. This is an attempt to look for efficiency of

Social:

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P24

Musculoskeletal manifestations of neurofibromatosis–A report of four cases

Yadav G, Gupta A K, Agarwal A K, Sharma V P, Kumar Dileep

Dept of PMR, King George's Medical University, Lucknow, India

The neurofibromatosesare autosomal dominant diseases that have widespread effects on ectodermal and mesodermal tissue, the commonest being neurofibromatosis type I (NF I) which is a multi-system disease caused by mutations in the NF1 gene encoding a RAS-GAP protein, neurofibromin, which negatively regulates RAS signaling. Besides neuro-ectodermal malformations and tumors, the skeletal system is often affected (e.g. scoliosis and long bone dysplasia) demonstrating the importance of neurofibromin for development and maintenance of the musculoskeletal system.

We are presenting four cases of neurofibromatosis with different musculoskeletal complications like deformities, scoliosis, flat foot, tibia vara, pseudoarthrosis of tibia, subluxation of hip and knee, plexiform neurofibromatosis involving lower extremities and discuss their relevance to the clinicians. This disorder being inheritable, genetic counseling of individuals must include these manifestations and complications. The relentless progressive nature of disease has a significant toll on the quality of life of affected patients throughout their lives and necessitates close observation due to the possibility of modulation with further growth.

P25

Myositis ossificans circumscripta–A case report

Neyaz Osama[1], Ghosal Vasundhara[2], Jhalani R[3], Equebal Ameed[4], Keshkar S[5], Ballav Ambar[6]

[1]2nd year DNB PGT, [2]2nd year DNB PGT, [3]Asst. Director (Services), [4]Asst. Director (Training), NIOH, Kolkata
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Case presentation: A 26 year old male patient of traumatic spastic paraplegia, secondary to compression fracture of D8-D10 level. Presented with sever LBP more around right buttock with right hip movements. During investigations, the presence of large, right-sided pelvic Heterotopic ossification was noted. Diagnosis was confirmed by blood investigations, x-rays, MRI. Malignancy was excluded by bone biopsy. Case was managed conservatively, the orthosis was changed.

Conclusion: Patient was discharged in early july 2012 with significant improvement in pain (VAS-1) & ROM of hip with proper counselling to patient, caregivers and necessary advice for resettlement.

Keywords: Heterotopic ossification, Myositis ossificans circumscripta; gluteal region, traumatic, changed orthosis.

P26

Deltoid paralysis following herpetic axillary nerve neuropathy–A case report

Hmingthanmawii[1], Zonunsanga C[1], Singh N Romi[2]

[1]2nd year PG trainee; [2]Associate professor
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Demographic profile of patients with traumatic spinal cord injury admitted in tertiary care rehabilitation centre

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Objective: To identify the demographic profile of patients with spinal cord injury(SCI) admitted in tertiary care rehabilitation centre

Study design: Retrospective descriptive study

Study duration: 1/10/11 to 30/09/12

Setting: PMR Department, RIMS, Imphal

Methods: Profiles of patients with traumatic SCI admitted in PMR ward RIMS were recorded using a structured proforma and analysed

Results: Among all 22 patients, 95.5% are male. The mean age is 40.41 ±15.1 years. Mean duration between date of injury and admission is 46.77±32.66 and median is 34.50(9-132) days. Mean duration of hospital stay is 44.82±61.63 and median is 20.50 (5-258) days. 72.7% are tetraplegics, C5 (59.09 %) is the most common neurological level. Fall from height is most common (50%) mechanism of injury, 36.4 % are RTA and 13.3% are direct hit on spine.63.6% of patients develop pressure sore and sacrum (78.57%) is the most common site. 27.3% of patients were treated with surgical operation before admission. 63.6 % had UTI.72.7% of patients had varying degree of spasticity. 54.5 % are ASIA grade A. 71.50 is the mean FIM score. Only 22.7 % underwent urodynamic study and all had hyperactive detrusor.

Conclusion: Majority of patients were male tetraplegics with fall from height as most common cause. More than half of patients had pressure sore and spasticity. Complete injury is commoner.

Keywords: spinal cord injuries, pressure sore, ASIA grade, spasticity, FIM score

P28

Organisms isolated from urine samples of traumatic spinal cord injury inpatients in a tertiary hospital and their antibiogram: a retrospective study

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Study Design: A Retrospective Descriptive Study

Setting: Department of Physical Medicine and Rehabilitation, RIMS, Imphal

Study Duration: 1st January 2012 to 31st October 2012

Materials and Methods: All the traumatic spinal cord injury inpatients whose urine were sent for urine culture and sensitivity during admission were included in the study. There were a total of fifteen such patients. Urine culture revealing a bacterial colony count of 10^5 colony forming units (cfu)/ml was taken as significant bacteriuria.

Results: Of all 15 patients, 13(86.7%) patients had significant bacteriuria showing only Gram negative bacteria and 2(13.3%) patients had sterile urine. All the positive urine samples showed growth of only single bacteria except in 1(6.7%) patient. The most common organism isolated was E. coli which was found in 8(53.3%) urine samples. This was followed by 1(16.7%) each for Klebsiella, Klebsiella with Pseudomonas, Pseudomonas, Providentia and Enterobacter. All the organisms were sensitive to imipenem and resistant to trimethoprim-sulphamethoxazole.

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The endless drive for more and more products, speed, power, comforts and leisure has created more severe problems and disabilities due to trauma disease.

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Trauma rehabilitation aims at preventing trauma disease, there by trying to prevent primary disability there by preventing the secondary disability altogether in the best interest of man kind.

P30

Normal electrodiagonostic study is helpful to diagnose lumbosacral radiculopathy

Kataruka Mohit[1], Pramanik R[2], Halder R N[3]
[1]MD PGT, [2]Assist Prof, [3]Prof & HOD
Dept of PMR, IPGMER, Kolkata

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Social:

- Abandoned child
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Keywords: Deltoid paralysis, herpes zoster infection, axillary nerve neuropathy, shoulder subluxation

P27

Demographic profile of patients with traumatic spinal cord injury admitted in tertiary care rehabilitation centre

Zonunsanga C, Chanu Asem Rangita, Hmingthanmawii, Pertin Minggam, Singh N Romi

Objective: To identify the demographic profile of patients with spinal cord injury(SCI) admitted in tertiary care rehabilitation centre

Study design: Retrospective descriptive study

Study duration: 1/10/11 to 30/09/12

Setting: PMR Department, RIMS, Imphal

Methods: Profiles of patients with traumatic SCI admitted in PMR ward RIMS were recorded using a structured proforma and analysed

Results: Among all 22 patients, 95.5% are male. The mean age is 40.41 ±15.1 years. Mean duration between date of injury and admission is 46.77±32.66 and median is 34.50(9-132) days. Mean duration of hospital stay is 44.82±61.63 and median is 20.50 (5-258) days. 72.7% are tetraplegics, C5 (59.09 %) is the most common neurological level. Fall from height is most common (50%) mechanism of injury, 36.4 % are RTA and 13.3% are direct hit on spine.63.6% of patients develop pressure sore and sacrum (78.57%) is the most common site. 27.3% of patients were treated with surgical operation before admission. 63.6 % had UTI.72.7% of patients had varying degree of spasticity. 54.5 % are ASIA grade A. 71.50 is the mean FIM score. Only 22.7 % underwent urodynamic study and all had hyperactive detrusor.

Conclusion: Majority of patients were male tetraplegics with fall from height as most common cause. More than half of patients had pressure sore and spasticity. Complete injury is commoner.

Keywords: spinal cord injuries, pressure sore, ASIA grade, spasticity, FIM score

P28

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Chanu Asem Rangita, Zonunsanga C, Hmingthanmawii, Pertin Minggam, Singh N Romi

Objectives: To determine the antibiotic sensitivity of urine amongst traumatic spinal cord injury inpatients during admission in a tertiary hospital at Imphal

Study Design: A Retrospective Descriptive Study

Setting: Department of Physical Medicine and Rehabilitation, RIMS, Imphal

Study Duration: 1st January 2012 to 31st October 2012

Materials and Methods: All the traumatic spinal cord injury inpatients whose urine were sent for urine culture and sensitivity during admission were included in the study. There were a total of fifteen such patients. Urine culture revealing a bacterial colony count of 10^5 colony forming units (cfu)/ml was taken as significant bacteriuria.

Results: Of all 15 patients, 13(86.7%) patients had significant bacteriuria showing only Gram negative bacteria and 2(13.3%) patients had sterile urine. All the positive urine samples showed growth of only single bacteria except in 1(6.7%) patient. The most common organism isolated was E. coli which was found in 8(53.3%) urine samples. This was followed by 1(16.7%) each for Klebsiella, Klebsiella with Pseudomonas, Pseudomonas, Providentia and Enterobacter. All the organisms were sensitive to imipenem and resistant to trimethoprim-sulphamethoxazole.

Conclusion: OnlyGram negative bacteria were isolated from the urine samples of traumatic Spinal Cord Injury inpatients of PMR, RIMS, Imphal with E coli as the most common organism. All the isolates were found to be sensitive to imipenem and again all were resistant to trimethoprim-sulphametoxazole.

Keywords: significant bacteriuria, antibiogram

P29

Prevention of disability in trauma

Singh Nirankar

Nature of trauma and the type of disability which occurs as a direct consequence of it has been changing since the human being has come into existence. The trauma to the spine is one of the most disabling of the trauma disease.

The incidence and the type of primary disability is often a reflection of contemporary life style of the society. For thousands of years, the simple society of ours, presented a few and simple injuries due to trauma. Now we have enriched our lives through technology and increased the risk to trauma disease thousands times

The endless drive for more and more products, speed, power, comforts and leisure has created more severe problems and disabilities due to trauma disease.

Rehabilitation care includes preventive and therapeutic

The belief that Rehabilitation should commence after the termination of specific treatment, is the basis for classifying rehabilitation at tertiary level of prevention, is regretfully wide spread but obviously is a misconception.

The fact that injury to spine is no exception in getting traumatized in today's scenario of complex trauma, where the consequences of spinal injury are much more grave and disabling to the individual and the health of the nation. Therefore we must make every effort to prevent this disabling trauma disease for the better present and future health of the nation and its citizens.

Trauma rehabilitation aims at preventing trauma disease, there by trying to prevent primary disability there by preventing the secondary disability altogether in the best interest of man kind.

P30

Normal electrodiagonostic study is helpful to diagnose lumbosacral radiculopathy

Kataruka Mohit[1], Pramanik R[2], Halder R N[3]
[1]MD PGT, [2]Assist Prof, [3]Prof & HOD
Dept of PMR, IPGMER, Kolkata

Introduction: In current scenario of physiatric practice, electrodiagonosis is an important tool to establish different types of neurological condition. This is an attempt to look for efficiency of

NCS in management of lumber radiculopathy.

Aims & Objectives: To find out role of NCS in management of lumber radiculopathy.

Study design: Cross sectional observational study.

Study population: Patients attending PM&R OPD, IPGME&R, presents with radicular non-inflammatory low back pain.

Study place: Dept. of PM&R, IPGME&R, Kolkata.

Duration : 6 months (from 1st March, 2012 to 31st August 2012)
Sample size: 16

Inclusion criteria:

1. Patient presents with below knee neuralgic pain after indirect trauma
2. Patient who gives consent
3. Age 18 year
4. Both sex
5. Clinical provisional diagnosis of L5S1 radiculopathy with differential diagnosis of lumber plexopathy and peripheral neuropathy.

Exclusion criteria:

1 Patient with bleeding diathesis
2. Patient who did not give consent
3. Age 18 year
4. Clinically confirmed L5S1 radiculopathy

Methodology: After getting institutional ethical committee clearance, all patients who fulfil the above criteria are included in the study & further diagnostic conformation done by the standard diagnostic criteria of lumber radiculopathy by NCS. Later on the patients with treated with conservartive management for radiculopathy.

Results: At the end of the study, the data were analysed by statistical tools using Statistica version 6 shows that all variables are normally distributed. Mean value of Latency of common peroneal nerve is 4.12 with SD of 0.534, mean value of amplitude of common peroneal nerve is 7.33 with SD of 0.675. SNAP and F wave study are also normal.

Discussion: After proper history taking and clinical examination , it was impossible to conclude with single confirm diagnosis of L5S1 radiculopathy because patient was also complaint of pain around L4, L5, S1 regions. Although after clinical examination we found L5S1 sensory changes without any motor deficit in this group. At the end of the clinical examination it was impossible to differentiate with lower lumber plexopathy L5S1 or peripheral neuropathy of sciatic nerve or its branches. After getting normal electrodiagonostic test value it was possible to exclude the differential of plexopathy and peripheral neuropathy.

Conclusion: Although NCS does not pick an abnormal data in patient with radiculopathy or confirm directly as a case of radiculopathy this special test is specifically helpful to exclude the differential diagnosis of radiculopathy.

P31

Comparison of quality of life of parents of children with disability with those of children without disability

Jain S, Majumdar R, Acharjya M, Gupta V K

Department of PMR, LHMC & Associated Hospitals,New Delhi

Objective: To study the quality of life of parents having children with disability.

To compare their quality of life with parents of children without disability

Material & Method: All the parents of patients attending the PMR OPD in our hospital on follow ups having age group of 3 years and above were taken as case group. The parents of children having no disability were taken as control group from the OPD coming for other reasons like accompanying someone else. The epidemiological data and quality of life of parents were assessed using a pre-structured proforma. For quality of life of parents WHO-QOL Bref scale was used.

Result: Two hundred cases were enrolled in each group in one year of period following Ethical Committee approval. The quality of life was worse in case group as compared to control group grossly as statistical analysis is not completed yet.

Conclusion: We should start the counselling of parents of patients with disabilities and should guide policy makers to start Respite Services for such parents.

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Conclusion: We should start the counselling of parents of patients with disabilities and should guide policy makers to start Respite Services for such parents.

O50

Exercise in diabetes. Why, what, how and when…?

Chandran Roy R

Assistant Professor, PMR, Govt. Medical College, Calicut, Kerala

Introduction: Exercise is a key player along with dietary modification in DM management. Why should a physiatrist be equipped for managing DM? As we all know most of the complications of DM like diabetic arthropathies, neuropathies, stroke and other CVDs, amputees will reach the rehabilitation department. For treating the complications of a disease; we should definitely treat and control the disease along with or prior to managing the complications. So 'Physiatry is actually beyond rehabilitation'. As experts in exercise therapy; we actually have an upper hand in its prescription and implementation. Obesity and DM have reached pandemic proportions. So as a part of the modern medicine family, the Physiatrists too have the responsibility to control and curtail this pandemic.

Topic Proper: Studies have clearly shown that when a person is on diet control alone without exercise,they tend to put on as much or more weight than he took off initially. This will increase the insulin resistance and ultimately worsens the glycaemic status. Exercise also helps to reduce the chances of developing diabetes in prediabetic persons. The benefits of exercise in patients with diabetes and those with metabolic syndrome include favourable lipid levels and BP, prevention of CVD and cancers,improved tolerance for ADL, maintain BMD etc regardless of the weight loss occurred. The American Diabetic Association in 2012 guidelines recommends that diabetes patients should perform at least 150 min/week of moderate intensity aerobic physical activity and in the absence of contraindications; they should perform resistance training 3 times/week. The exercise prescription should be tailor made for each patient considering the physical conditions, cardiac status etc.

Keywords: Physiatrists' role in Diabetes management, Aerobic and anaerobic exercise, Exercise prescription

O51

Prevalence of musculoskeletal complications in diabetes mellitus—Calicut experience

Antony Anit

Background: India has a total number of 61.3 million diabetics as per the estimation for 2011 by International Diabetes Federation and is considered to be the diabetic capital of the world. Diabetes mellitus is associated with a variety of musculoskeletal complications and their prevalence in these patients has increased in the recent years affecting significantly their quality of life. A wide range of musculoskeletal syndromes have been described in association with diabetes, namely diabetic cheiro-arthropathy, adhesive capsulitis of shoulder, carpal tunnel syndrome, Dupuytren's contracture, hyperostosis, osteoarthritis, hyperuricaemia, etc.

AIM: To study the prevalence of musculoskeletal complications in diabetic patients attending the OPD & Lifestyle Diseases Rehabilitation Clinic at Medical College, Calicut from 1/9/2011 to 31/8/2012

Study Design: Cross sectional study.

Methods: Diabetes was diagnosed by ADA guidelines; muculoskeletal complications were diagnosed by unbiased clinical observations on the basis of standardised case definitions or criteria.

Results: Osteoarthritis of knee was the most common musculoskeletal disorder followed by adhesive capsulitis of shoulder, complex regional pain syndrome, carpal tunnel syndrome & Dupuytren's contracture.

Conclusion: Thorough musculoskeletal examination should be included as an integral part in the management of diabetes mellitus.

Keywords: diabetes mellitus, musculoskeletal complications, prevalence.

O52

Management of chronic low back pain–a prospective analytic study

Sahoo P K, Sahoo J, Das S P, Mohanty R N

Introduction: 10% of the total patients attending the outpatient department are the chronic low back pain patients. LBP has been cited as the second most frequent reason to visit a physician for a chronic condition, the fifth most common cause for hospitalization, and the third most frequent reason for a surgical procedure. It is a major burden over the health care system. Over all it decreases the quality of life.Treatment for chronic low back pain falls into three broad categories: monotherapies, mulitidisciplinary therapy, and reductionism.Most monotherapies either do not work or have limited efficacy. The reductionist approach should be implemented when a specific diagnosis is needed.

The objective of the study is to compare the result of chronic low back pain management with medication, medication with physiotherapy & by surgical method.

Material & Methods: Total 88 patients given consent for participating for the study are included & followed for average of 10 months. The inclusion criterion was back pain that persisted for more than 3 months irrespective of treatment. Cases with history of major trauma, listhesis, tumor, infection, children or adolescents with low back pain, pregnant women,patients with low back pain from sources outside the back (nonspinal low back pain) were excluded from the study. With the consent of thepatient cases were arbitrarily selected for different three groups. First group were advised with life style modifications with home exercise program. Second group were advised medication with instructions of first group. Third group of patients those who were not willing for further medical management were advised for surgery. Periodic assessment was done using VAS score, McGill pain score&Oswestry disability index.

Result: Patients in all the three groups improved significantly. Physiotherapy with Medicine Group did better than Physiotherapy only.All patients in surgery group improved except one who had radiculopathy referring to multiple levels.

Conclusion: Most of the patients of Back ache do not need surgery.Option of Physiotherapy and conservative care should be given to all patients of Chronic Low Back Ache. Multidisciplinary therapy based on intensive exercises improves physical function and has modest effects on pain. Counseling played a great role in managing psychosomatic pain.

Keywords: low back pain, therapy, VAS.

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Frequency : Quarterly **ISSN0973-2209**

Full text of the Journal and Guidelines to the contributors are available on website.

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Frequency : Quarterly **ISSN0973-2209**

Full text of the Journal and Guidelines to the contributors are available on website.

Subscription :

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Poster Abstracts

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significance between groups (pain p=0.167, Anxiety p=0.133 and Depression p=0.070). Overall functional status improved in both groups without significant difference (p=0.402).

Conclusions: Significant improvement was observed in quality of sleep with yogic relaxation, pranayama, and meditation in GBS patients.

Keywords: Guillain-Barré syndrome; rehabilitation; yoga

P4

Balance and gait assessment among lower-limb amputees and comparison of status with healthy controls; a hospital based cross sectional study

Khanna M[1], Singh U[2], Yadav S L[3]

[1]*Assistant Professor, DPNR, NIMHANS, Bangaluru*
[2]*Professor, Dept of PM&R, AIIMS, New Delhi*
[3]*Additional Professor, Dept of PM&R, AIIMS, New Delhi*

Background: Amputations, a form of treatment carried out to eliminate pathology, result in musculoskeletal disabilities that comprise around 8% of all loco-motor disabilities in India. Balance retraining comprises an important aspect of rehabilitation programme for such patients.

Objective: Toassess balance, gait changes, and activities of daily living in patients with lower limb amputation in comparison with healthy subjects.

Method: Hospital based, cross-sectional study conducted among 30 lower limb amputees and equal number of age and sex matched controls. Balance was assessed using dynamic posturography, and gait evaluation was done clinically. Activities of daily living were assessed with questionnaire.

Results: Patients had difficulty in both dynamic balance and gait. Despite amputation, no significant difference was observed on testing proprioception. In the sensory organization tests with difficult tasks, patients needed more sensory input from vision. Significant difference was observed for limits of stability, rhythmic weight shifts and for gait variables other than walking base. None of the patients had major difficulties with sexual functions and activities of daily living.

Conclusion: Lower limb amputees needed more of visual feedback to maintain balance. The training for prosthesis use and implementation of various sensory conditions in the physical training of patients with lower limb amputation can contribute to balance recovery.

P5

Spontaneous rupture of flexor retinaculum of ankle – An unusual case

Agrawal Vipul, Sharma Sanjeev Kumar, Singh L Sushil, Yadav S L, Singh U

Department of PMR, AIIMS

Benign joint hypermobility syndrome (BJHS) is a multisystem, non progressive, noninflammatory inherited connective tissue disorder with hypermobility in whichmusculoskeletal problems like joint pains, recurrent sprains, fractures, dislocations, tendonitis, osteoarthritis can occur in the absence of systemic rheumatological disease. It is a commonly encountered disease entity in day to day physiatrist's practice and can be easily overlooked and not generally being considered as one of the differential diagnosis. We present here an unusual case of a middle age lady suffering from benign joint hyper mobilitysyndrome presenting with non traumatic spontaneous rupture of flexor retinaculum ofankle highlighting the importance of considering joint hypermobility as an important predisposing factor in the retinaculum rupture and considering clinical testing of joint, useof MRI as an important aid in the diagnosis of such entity.

P6

Heterotopic Ossification of shoulder in stroke–An unusual presentation

Sharma Sanjeev Kumar, Rajkumar, Yadav S L, Singh U

Dept. of PMR, AIIMS

Heterotopic ossification (HO) is the formation of lamellar bone within the soft tissuesurrounding a joint. It is usually seen after spinal cord injury (SCI), traumatic braininjury (TBI), burn, and direct trauma. HO in post-stroke hemiplegia is rare; only a fewcases of HO in lower limb i.e. hip or knee has been reported in the literature. To ourknowledge, HO of shoulder joint on hemiparetic limb has not been reportedpreviously. We present here an unusual case of an old man who had right-sidedpost-stroke hemiplegia with HO shoulder on the affected side.

P7

Evaluation of the improvement in functional independence in post operative cerebral palsy children

Mathangi S

Background: Cerebral palsy leads to secondary musculoskeletal problems. Children with cerebral palsy received soft tissue surgical release with post-operative management of Physiotherapy and Occupational Therapy with Orthosis.

Methods: The study is a cohort study. FIM scale assesses physical and cognitive ability. Preoperative evaluation was done on 45 children in the PMR OPD for a period of two months. These children underwent soft tissue surgical release. Post operatively Physical and Occupational therapy were given to these patients each for an hour per day.Post 6 weeks, evaluation on the previously evaluated children was done using FIM score.

Results: Transfers showed 7.7% improvement that initially were able to do less than 25% of the task, after receiving surgery got improved in transfer by two levels. There is one level improvement in children who received surgery. Children who received physiotherapy with surgery showed improvement by five levels. 31.6% of them became modified independent where a device like walking stick is used for completing the task but they required no physical help. 19.2 % of children after surgery were able to do more than 75% of task that included mobility.

Conclusion: The study showed in addition to Surgery if Physical and Occupational therapy is also provided, then there is better improvement in Mobility and Self-care. It is necessary to know that the brain damage due to cerebral palsy cannot be reversed and that the treatment of cerebral palsy mainly focuses on maximizing individual potential and enhancing their independence.

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Results: Quality of sleep improved significantly with reduction of PSQI score in yoga group ($p=0.048$). There was reduction of pain scores, anxiety and depression in both the groups without statistical

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Conclusions: Significant improvement was observed in quality of sleep with yogic relaxation, pranayama, and meditation in GBS patients.

Keywords: Guillain-Barré syndrome; rehabilitation; yoga

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Balance and gait assessment among lower-limb amputees and comparison of status with healthy controls; a hospital based cross sectional study

Khanna M[1], Singh U[2], Yadav S L[3]

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[2]*Professor, Dept of PM&R, AIIMS, New Delhi*
[3]*Additional Professor, Dept of PM&R, AIIMS, New Delhi*

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Spontaneous rupture of flexor retinaculum of ankle – An unusual case

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Evaluation of the improvement in functional independence in post operative cerebral palsy children

Mathangi S

Background: Cerebral palsy leads to secondary musculoskeletal problems. Children with cerebral palsy received soft tissue surgical release with post-operative management of Physiotherapy and Occupational Therapy with Orthosis.

Methods: The study is a cohort study. FIM scale assesses physical and cognitive ability. Preoperative evaluation was done on 45 children in the PMR OPD for a period of two months. These children underwent soft tissue surgical release. Post operatively Physical and Occupational therapy were given to these patients each for an hour per day.Post 6 weeks, evaluation on the previously evaluated children was done using FIM score.

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The demographic profile of the group was as follows: mean age - 30.0±9.0 years, men: woman: 7:24, number of relapses - 4.74±3.6 , mean duration of illness - 4.9±4.4 years and mean EDSS score -3.45±2.24. The major impairments were Quadriparesis -7, (22.6%), paraparesis -15, (48.4%), sensory disturbances -18(58.1%), visual problems -22(71%), sphincter disturbances -18 (58.1%), diplopia -13(41.9%), dysarthria -10 (32.3%) and ataxia -8. (25.8%). Fatigue was rather common with the mean fatigue score in the cohort being 38.7±18.5. Eighteen patients (58.07%) with score above the cut off value of 36 in the fatigue severity scale were older (p-**0.01**), had poor quality of sleep (p-0.005), higher score on depression scale (p-0.005) and poor quality of life indices than their counterparts. However, they did not differ on Barthel score. All the four domains of QoL were significantly affected by fatigue.

Assessment of fatigue should be routinely carried out during evaluation for rehabilitation, in view of its therapeutic implications.

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Shefstim: an automated setup of functional electrical stimulation for drop foot

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Design: Randomized control pilot study.

Setting: Neurological rehabilitation unit of university tertiary research hospital.

Subject: Twenty two GBS patients, who consented for the study and satisfied selection criteria, were randomly assigned to yoga and control groups. Ten patients in each group completed the study.

Method: The yoga group received 15 sessions in total over a period of 3 weeks (1 hour per session), one session per day on five days per week that consisted of relaxation, Pranayama (breathing practices) and Guided meditation in addition to conventional rehabilitation therapeutics. All the patients were assessed using Pittsburgh Sleep Quality Index, Numeric pain rating scale, Hospital anxiety and Depression scale and Barthel index score. Mann-Whitney U test and Wilcoxons signed rank test were used for statistical analysis

Results: Quality of sleep improved significantly with reduction of PSQI score in yoga group ($p=0.048$). There was reduction of pain scores, anxiety and depression in both the groups without statistical

significance between groups (pain p=0.167, Anxiety p=0.133 and Depression p=0.070). Overall functional status improved in both groups without significant difference (p=0.402).

Conclusions: Significant improvement was observed in quality of sleep with yogic relaxation, pranayama, and meditation in GBS patients.

Keywords: Guillain-Barré syndrome; rehabilitation; yoga

P4

Balance and gait assessment among lower-limb amputees and comparison of status with healthy controls; a hospital based cross sectional study

Khanna M[1], Singh U[2], Yadav S L[3]

[1]*Assistant Professor, DPNR, NIMHANS, Bangaluru*
[2]*Professor, Dept of PM&R, AIIMS, New Delhi*
[3]*Additional Professor, Dept of PM&R, AIIMS, New Delhi*

Background: Amputations, a form of treatment carried out to eliminate pathology, result in musculoskeletal disabilities that comprise around 8% of all loco-motor disabilities in India. Balance retraining comprises an important aspect of rehabilitation programme for such patients.

Objective: Toassess balance, gait changes, and activities of daily living in patients with lower limb amputation in comparison with healthy subjects.

Method: Hospital based, cross-sectional study conducted among 30 lower limb amputees and equal number of age and sex matched controls. Balance was assessed using dynamic posturography, and gait evaluation was done clinically. Activities of daily living were assessed with questionnaire.

Results: Patients had difficulty in both dynamic balance and gait. Despite amputation, no significant difference was observed on testing proprioception. In the sensory organization tests with difficult tasks, patients needed more sensory input from vision. Significant difference was observed for limits of stability, rhythmic weight shifts and for gait variables other than walking base. None of the patients had major difficulties with sexual functions and activities of daily living.

Conclusion: Lower limb amputees needed more of visual feedback to maintain balance. The training for prosthesis use and implementation of various sensory conditions in the physical training of patients with lower limb amputation can contribute to balance recovery.

P5

Spontaneous rupture of flexor retinaculum of ankle – An unusual case

Agrawal Vipul, Sharma Sanjeev Kumar, Singh L Sushil, Yadav S L, Singh U

Department of PMR, AIIMS

Benign joint hypermobility syndrome (BJHS) is a multisystem, non progressive, noninflammatory inherited connective tissue disorder with hypermobility in whichmusculoskeletal problems like joint pains, recurrent sprains, fractures, dislocations, tendonitis, osteoarthritis can occur in the absence of systemic rheumatological disease. It is a commonly encountered disease entity in day to day physiatrist's practice and can be easily overlooked and not generally being considered as one of the differential diagnosis. We present here an unusual case of a middle age lady suffering from benign joint hyper mobilitysyndrome presenting with non traumatic spontaneous rupture of flexor retinaculum ofankle highlighting the importance of considering joint hypermobility as an important predisposing factor in the retinaculum rupture and considering clinical testing of joint, useof MRI as an important aid in the diagnosis of such entity.

P6

Heterotopic Ossification of shoulder in stroke–An unusual presentation

Sharma Sanjeev Kumar, Rajkumar, Yadav S L, Singh U

Dept. of PMR, AIIMS

Heterotopic ossification (HO) is the formation of lamellar bone within the soft tissuesurrounding a joint. It is usually seen after spinal cord injury (SCI), traumatic braininjury (TBI), burn, and direct trauma. HO in post-stroke hemiplegia is rare; only a fewcases of HO in lower limb i.e. hip or knee has been reported in the literature. To ourknowledge, HO of shoulder joint on hemiparetic limb has not been reportedpreviously. We present here an unusual case of an old man who had right-sidedpost-stroke hemiplegia with HO shoulder on the affected side.

P7

Evaluation of the improvement in functional independence in post operative cerebral palsy children

Mathangi S

Background: Cerebral palsy leads to secondary musculoskeletal problems. Children with cerebral palsy received soft tissue surgical release with post-operative management of Physiotherapy and Occupational Therapy with Orthosis.

Methods: The study is a cohort study. FIM scale assesses physical and cognitive ability. Preoperative evaluation was done on 45 children in the PMR OPD for a period of two months. These children underwent soft tissue surgical release. Post operatively Physical and Occupational therapy were given to these patients each for an hour per day.Post 6 weeks, evaluation on the previously evaluated children was done using FIM score.

Results: Transfers showed 7.7% improvement that initially were able to do less than 25% of the task, after receiving surgery got improved in transfer by two levels. There is one level improvement in children who received surgery. Children who received physiotherapy with surgery showed improvement by five levels. 31.6% of them became modified independent where a device like walking stick is used for completing the task but they required no physical help. 19.2 % of children after surgery were able to do more than 75% of task that included mobility.

Conclusion: The study showed in addition to Surgery if Physical and Occupational therapy is also provided, then there is better improvement in Mobility and Self-care. It is necessary to know that the brain damage due to cerebral palsy cannot be reversed and that the treatment of cerebral palsy mainly focuses on maximizing individual potential and enhancing their independence.

P8

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Keywords: Post-polio Residual paralysis, Plano-valgus.

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Conclusion: Back pain in children should not be overlooked as their might be serious underlying pathology which may be overlooked in

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P8

Conservative management of a neglected case of Post-polio residual paralysis

Singh Yesh Veer[1], Sen M[2], Biswas M M[3], Saha Jayant[4], Chirania Anirudh[5]

[1]2nd Year DNB-PGT, [2]DNB, (PMR), [3]MD (AIIMS), DNB, MNAMS, Sr. consultant, [4]MD (PMR), Consultant, [5]1st Year DNB-PGT

Dept of PMR, SNP Hospital, Kolkata-20.

A 60 years old female patient reported in PMR-OPD of Sambhunath Pandit Hospital Kolkata, with complain of Low Back Pain without radiation, left Ankle Pain, Pain on medial border of Left foot and Left Foot deformity. Patient is diagnosed case of polio at six year of age. She does not has any other comorbid disease (Diabetes mellitus, Hypertension etc.). On the basis of History, Clinical and Radiological assessment, she was diagnosed as a Neglected case of post-polio residual paralysis with Plano-Valgus of left Foot with Callosities on medial border of foot with 30° lumbar Scoliosis. The patient is being treated conservatively (analgesic, exercise, orthoses, physical modalities) from past two years and has showed significant improvement in pain.

Keywords: Post-polio Residual paralysis, Plano-valgus.

P9

Hemiplegic shoulder pain (HSP) cause by a rare ganglion cyst of the bicipital tendon in a right hemiplegic patient: a case report

Sangme Ngampa[1], Mohes A S[2], Singh Th Khelendro[3], Singh L Nilachandra[4], Singh A K Joy[5]

Shoulder pain is a common complication after stroke that can inhibit recovery and reduce the quality of life. It occurs in as high as 72% of the cases which develops within weeks or months after the onset of hemiplegia. We here in report a case of 52 year old right sided hemiplegia of 6 months duration with right HSP for a period of 5 months. Motor control in the right upper limb was good. Clinical tests and other investigations for shoulder pathology were within normal limit. Musculoskeletal Ultrasound of the shoulder reveals a well defined cyst around the right bicipital tendon in the bicipital groove. Ultrasound guided wide bore needle aspiration of the cyst and Triamcinolone acetonite 40mg injection was performed in the same sitting. Several causes have been attributed to the development of HSP but a ganglion cyst of the bicipital tendon presenting as HSP has not been reported as yet. Also ectopic ganglion cysts at different sites has been reported but the ganglion cyst of the bicipital tendon causing chronic shoulder pain leading to functional limitation has not been reported in the literature so far.

Keywords: Stroke, HSP, Musculoskeletal Ultrasound, Bicipital tendon, Ganglion cyst, Triamcinolone acetonite

P10

Congenital deficiency of all four limbs, a rehabilitation challenge

Babu Rekha

Introduction: Congenital limb deficiency, that ranges from absence of a single digit to complete absence of a limb, has an approximate incidence of 0.3 to 1.0 per 1000 live births. But complete absence of all four limbs is far more uncommon.

Case report: We report a case of a four-year old female child with congenital deficiency of all four limbs. She poses a rehabilitation challenge since it is important to understand the changing needs of the growing child and consider aspects like mobility,activities of daily living,cognitive and psychosocial skills while planning management.This child is being rehabilitated with bilateral stubbies and axillary crutches.

P11

Subacute Progressive ascending myelopathy from T8 to C3 following percutaneous vertebroplasty causing cement leakage - a case report

Bhide Rohit[1], Barman Apurba[1], George Jacob[1], Thomas Raji[1], Mammen Suraj[2].

[1]Dept of PMR, [2]Dept of Radiology, CMC Velore

Percutaneous vertebroplasty (PVP) is used to manage osteoporotic vertebral body compression fractures. Relative safety of this procedure has been adequately justified in the literature. Complications following vertebroplasty range from minor to devastatingly major ones. One such complication is cement leakage into the spinal canal.

Subacute progressive ascending myelopathy (SPAM) is an infrequent neurological complication following spinal cord injury (SCI). Typical presentation in SPAM is ascending neurological deficits within weeks after the initial insult. Many authors have postulated various causes for the ascension of the neurological level, the precise cause still remains an enigma considering the rarity of this disorder amongst all spinal cord injuries. Till date all cases of SPAM have been mentioned as a result of trauma, compression or AV malformation.

We present a case of 62 year old lady with osteoporotic vertebral fracture who underwent percutaneous vertebroplasty and developed T6 complete paraplegia due to cement leakage. After a few weeks, the neurological level ascended to C3 sensory level and weakness in both upper limbs. Till date, no case of SPAM following PVP causing cement leakage is reported.

Literature is reviewed regarding SPAM and the possible rehab option along with management is discussed with regards to this patient.

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Key words: Back pain, Intradural lipoma, MRI, Spinal cord malformation (SCM).

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Ipsilateral hemiplegia caused by an infarct in the temporo-occipital region: A case report

Mohes A S

Hemiplegia is one of the commonest cases admitted in Physical Medicine and Rehabilitation (PMR) ward. A 67 years old right-handed male patient was admitted with weakness of right upper limb and lower limb and deviation of mouth towards left side. Patient was diagnosed as a case of ipsilateral hemiplegia and in the plain CT scan an infarct was seen at right temporo-occipital cerebral cortex. This case report is unique because ipsilateral hemiplegia with same sided lesion in brain is a rare phenomenon. Only few cases had been reported and those cases were mainly affected from recurrent attacks of stroke. The mechanism of such phenomenon is also still not understood.

P19

Anesthetic feet and self mutilation in a child – A diagnostic dilemma

Gupta A K

We are presenting a case of anesthetic feet with self-mutilation which was really a diagnostic challenge. A8 years male child, came to our OPD with chief complaint of Non healing plantar ulcer in right foot since he started walking and loss of toes.Patient was seen by several dermatologists and was diagnosed as a case of Hansen's disease and was treated with full course of MDT without any relief.Then the child attended our OPD and we found there was no evidence of Hansen' disease and patient had anesthetic feet with plantar ulcer and had smell of urine. Clinically there was no evidence of meningomyelocele, so patient was investigated for central cause. Thyroid profile, S.uric acid, Vit B12 was within normal limit. MRI Spine showed Pachyarachadonitis with myelopathic changes in dorsal spinal cord resulting in syringohydromyelia. Management of Plantar Ulcer was done by Off-loading and Behavioural modification and medication was done as advised by Child Psychiatrist. Long term care of anaesthetic feet was explained and counselling was done. Take home message is that In case of planar ulcer with anesthetic feet with bladder involvement we should think of mengigomyelocele and other causes like syringomyelia.

20

Ankylosing spondylitis with muscle involvement – A case report

Touthang Alex Thangjalet, Naorem Bimol, Singh Y Nandabir

Case: A 38 yrs old male reported to PMR Department, RIMS with complain of pain in both the hip, knee and shoulder for the past 6 months. There was history of low back pain with stiffness which was relieved by activities. On examination chest expansion was 2cm, decreased mobility of lumbar spine, tender sacroiliac joints, wasting of both supraspinatus, right deltoid muscle was noted. There was no significant family history. Laboratory investigations reveals HLA-B27 positive. Needle EMG, nerve conduction test and muscle biopsy of the affected muscles were normal. Radiologicaly erosion of the sacroiliac joints was noted. MRI Cervical spine was normal. Based on clinical examination and investigations, we diagnosed him as a case of ankylosing spondylitis

Patient was started on sulfasalazine along with exercise programme and at followed up after 3 months there was significant improvement in both pain and function.

Conclusion: Muscle involvement in ankylosing spondylitis is a rare occurrence. The presence of muscle atrophy can misled the diagnosis and delay the initiation of appropriate therapy. Possible explanation for the unusual muscle atrophy of this patient could be radiculitis with involvement of paravertebral muscle and partly due to inactivity.

Keywords: ankylosing spondylitis, muscle atrophy.

P21

Outcomes in paraplegics of different etiologies –A cross-sectional study

Sumalatha K B

Spinal cord lesion affects small but significant portion of population. One of the most difficult tasks is to assess the prognosis in the different types of paraplegias. There have been many studies looking at different outcomes in various types of paraplegia but only a few comparing the outcomes between each other. This study aims to know and compare the outcomes with respect to neurological and clinical improvement or worsening in paraplegias of different etiologies. We did a cross-sectional study on paraplegias of various etiologies like traumatic, transverse myelitis, Potts paraplegias etc. We assessed OPD patients who attended Dept of PMR, AIIMS and also those who were admitted as inpatients in PMR IPD with a minimum duration of one year after the onset of paraplegia. We also tried to assess the difference in the outcomes in those who were rehabilitated and those who were not. In our study we noted that the outcome varies with respect to different etiologies of paraplegias.

P22

Challenges in managing a dyskinetic CP in rural setting –A case report

Francis Shigy, Jose Naveen Mathew, Sankaranarayanan H

Introduction: Cerebral palsy is common, affecting about 2-3 per 1000 children. These children may have a motor disorder characterised by spasticity, dystonia or both. This can result in significant difficulty with activities of daily living, pain and long term joint deformity.

Case Discussion: 12 year old Dinesh presented with dystonic movements of the left arm and leg and significant delay in developmental milestones from early infancy five year back.

Challenges we faced in the last five years:
Medical:

- Difficulty in controlling dystonia with medical and therapeutic interventions
- Chronic malnutrition
- Dependency in ADL and mobility

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Case: A 38 yrs old male reported to PMR Department, RIMS with complain of pain in both the hip, knee and shoulder for the past 6 months. There was history of low back pain with stiffness which was relieved by activities. On examination chest expansion was 2cm, decreased mobility of lumbar spine, tender sacroiliac joints, wasting of both supraspinatus, right deltoid muscle was noted. There was no significant family history. Laboratory investigations reveals HLA-B27 positive. Needle EMG, nerve conduction test and muscle biopsy of the affected muscles were normal. Radiologicaly erosion of the sacroiliac joints was noted. MRI Cervical spine was normal. Based on clinical examination and investigations, we diagnosed him as a case of ankylosing spondylitis

Patient was started on sulfasalazine along with exercise programme and at followed up after 3 months there was significant improvement in both pain and function.

Conclusion: Muscle involvement in ankylosing spondylitis is a rare occurrence. The presence of muscle atrophy can misled the diagnosis and delay the initiation of appropriate therapy. Possible explanation for the unusual muscle atrophy of this patient could be radiculitis with involvement of paravertebral muscle and partly due to inactivity.

Keywords: ankylosing spondylitis, muscle atrophy.

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Case Discussion: 12 year old Dinesh presented with dystonic movements of the left arm and leg and significant delay in developmental milestones from early infancy five year back.

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Gupta A K

We are presenting a case of anesthetic feet with self-mutilation which was really a diagnostic challenge. A8 years male child, came to our OPD with chief complaint of Non healing plantar ulcer in right foot since he started walking and loss of toes.Patient was seen by several dermatologists and was diagnosed as a case of Hansen's disease and was treated with full course of MDT without any relief.Then the child attended our OPD and we found there was no evidence of Hansen' disease and patient had anesthetic feet with plantar ulcer and had smell of urine. Clinically there was no evidence of meningomyelocele, so patient was investigated for central cause. Thyroid profile, S.uric acid, Vit B12 was within normal limit. MRI Spine showed Pachyarachadonitis with myelopathic changes in dorsal spinal cord resulting in syringohydromyelia. Management of Plantar Ulcer was done by Off-loading and Behavioural modification and medication was done as advised by Child Psychiatrist. Long term care of anaesthetic feet was explained and counselling was done. Take home message is that In case of planar ulcer with anesthetic feet with bladder involvement we should think of mengigomyelocele and other causes like syringomyelia.

20

Ankylosing spondylitis with muscle involvement – A case report

Touthang Alex Thangjalet, Naorem Bimol, Singh Y Nandabir

Case: A 38 yrs old male reported to PMR Department, RIMS with complain of pain in both the hip, knee and shoulder for the past 6 months. There was history of low back pain with stiffness which was relieved by activities. On examination chest expansion was 2cm, decreased mobility of lumbar spine, tender sacroiliac joints, wasting of both supraspinatus, right deltoid muscle was noted. There was no significant family history. Laboratory investigations reveals HLA-B27 positive. Needle EMG, nerve conduction test and muscle biopsy of the affected muscles were normal. Radiologicaly erosion of the sacroiliac joints was noted. MRI Cervical spine was normal. Based on clinical examination and investigations, we diagnosed him as a case of ankylosing spondylitis

Patient was started on sulfasalazine along with exercise programme and at followed up after 3 months there was significant improvement in both pain and function.

Conclusion: Muscle involvement in ankylosing spondylitis is a rare occurrence. The presence of muscle atrophy can misled the diagnosis and delay the initiation of appropriate therapy. Possible explanation for the unusual muscle atrophy of this patient could be radiculitis with involvement of paravertebral muscle and partly due to inactivity.

Keywords: ankylosing spondylitis, muscle atrophy.

P21

Outcomes in paraplegics of different etiologies –A cross-sectional study

Sumalatha K B

Spinal cord lesion affects small but significant portion of population. One of the most difficult tasks is to assess the prognosis in the different types of paraplegias. There have been many studies looking at different outcomes in various types of paraplegia but only a few comparing the outcomes between each other. This study aims to know and compare the outcomes with respect to neurological and clinical improvement or worsening in paraplegias of different etiologies. We did a cross-sectional study on paraplegias of various etiologies like traumatic, transverse myelitis, Potts paraplegias etc. We assessed OPD patients who attended Dept of PMR, AIIMS and also those who were admitted as inpatients in PMR IPD with a minimum duration of one year after the onset of paraplegia. We also tried to assess the difference in the outcomes in those who were rehabilitated and those who were not. In our study we noted that the outcome varies with respect to different etiologies of paraplegias.

P22

Challenges in managing a dyskinetic CP in rural setting –A case report

Francis Shigy, Jose Naveen Mathew, Sankaranarayanan H

Introduction: Cerebral palsy is common, affecting about 2-3 per 1000 children. These children may have a motor disorder characterised by spasticity, dystonia or both. This can result in significant difficulty with activities of daily living, pain and long term joint deformity.

Case Discussion: 12 year old Dinesh presented with dystonic movements of the left arm and leg and significant delay in developmental milestones from early infancy five year back.

Challenges we faced in the last five years:
Medical:

- Difficulty in controlling dystonia with medical and therapeutic interventions
- Chronic malnutrition
- Dependency in ADL and mobility

Study place: Dept. of PM&R, IPGME&R, Kolkata.

Duration : 6 months (from 1st March, 2012 to 31st August 2012)

Sample size: 36

Inclusion criteria:

1. Patient with clinical diagnosis of CTS
2. Patient who give consent
3. Age 18 years
4. Both sex

Exclusion criteria:

1. Patient with clinical diagnosis of CTS
2. Patient who did not give consent
3. Age 18 years

Methodology: After getting institutional ethical committee clearance, all patients who fulfil the above criteria are included in the study & further diagnostic conformation done by the standard diagnostic criteria of NCS. The same group of patient have been also screened for radiological entrapment criteria for CTS.

Results: At the end of the study, the data were analysed by statistical tools shows that

1. Musculoskeletal USG has sensitivity of 92.3 with 95% CI of 74.9 to 99.1 and specificity of 70.0 with 95% CI of 34.8 to 93.3
2. Predictive value of +ve test is 88.9% with 95% CI of 70.8 – 97.7 and Predictive value of –ve test is 77.8% with 95% CI of 40 – 97.2.
3. Kappa study shows value of 0.64(0.36 – 0.93)

Conclusion:

1. Musculoskeletal USG is a good diagonostic tool for diagonosis of CTS
2. Musculoskeletal USG cannot be considered conclusive investigation for CTS as kappa study value is <0.7
3. Musculoskeletal USG can not replace NCS in diagnosis of CTS.

O23

Study to evaluate efficacy of local steroid injection in treatment of carpal tunnel syndrome with respect to subjective and objective clinical findings, electro physiologic and ultrasonographic parameters

Ali Junis

Objective: To Evaluate efficacy of local steroid injection in treatment of carpal tunnel syndrome with respect to subjective and objective clinical findings, electro physiologic and ultrasonographic parameters.

Methods: A prospective follow up study was conducted on 44 consecutive patients with 73 hands with symptomatic carpal tunnel syndrome (CTS) confirmed by ultrasonographically and electro physiologically. Patients were followed up for 3 months after steroid injection. Outcome measures were evaluated by improvement in VAS scale, Modified Boston Carpal Tunnel Questionnaire symptom and function scores, Electrophysiological and Ultrasonograhic parameters.

Results: After steroid injection significant improvement of pain was seen as measured with Visual analogue scale ($p < 0.001$). Statistically significant improvement were seen in grip strength, MBCTQ (Modified Boston Carpal Tunnel Questionnaire) symptom score and MBCTQ function score from baseline to 3 month follow-up ($P < 0.001$). Significant improvements were also noted in nerve conduction studies in sensory distal latency (SDL), mean distal latency (MDL), sensory nerve action potential (SNAP). We observed statistically significant reduction in cross sectional area of median nerve after 3 months follow up by ultrasound.

Conclusion: Local steroid injection is a simple, safe and cost effective intervention in treatment of CTS. Local steroid injection provides rapid relief of symptoms and improvement of physical function, neurophysiologic and ultrasonographic parameters.

O24

Study of effectiveness of gravity lumbar reduction therapy (GLRT) program in the treatment of symptomatic lumbar prolapse intervertebral disc (PIVD)

Rai Bijendra, Naorem Bimol, Singh Y Nandabir, Wangjam K

Aim: To study the effectiveness of gravity lumbar reduction therapy program in the treatment of symptomatic lumbar prolapse intervertebral disc.

Study design: Randomized control trial

Setting: Department of PMR, RIMS, Imphal

Participants: One hundred clinically diagnosed lumbar PIVD patients from September 2010 to March 2012

Intervention: Patients were randomly divided into intervention (A) and control (B) groups. Group A (53 patients) underwent GLRT from 45º with daily increments of 5º till 70º–90º was achieved. Group B (47 patients) received 3 doses of 80 mg methylprednisolone through intra-laminar epidural injection (ESI) at intervals of 1 week at the site of prolapse. Assessments were made at baseline, weekly for 3 weeks, then at 3rd and 6th months.

Outcome measures:

Visual analogue scale (VAS)
Spine specific functional measures–Oswestry Disability Index (ODI)
Straight leg raising test (SLRT)

Results: Improvements in VAS and ODI within each group were statistically significant (p value <.05). But the improvement in VAS and ODI between the two groups were not statistically significant (p value 0.07 and 0.13 respectively). There was also strong negative correlation between the reduction in VAS and ODI, and increase in degree of SLRT between both treatments as assessed by Pearson correlation test.

Conclusion: GLRT program is effective and safe in the treatment of symptomatic lumbar PIVD.

Keywords: Gravity lumbar reduction therapy, intra-laminar epidural injection, Oswestry Disability Index

O25

Comparative efficacy of platelet rich plasma injection, corticosteroid injection and ultrasonic therapy in the treatment of periarthritis shoulder

Singh Neha, Kothari S Y, Srikumar V

Objectives: To compare the effectiveness of Platelet rich plasma injection, Corticosteroid injection and Ultrasonic therapy in the treatment of Periarthritis shoulder in terms of decrease in pain, improvement in limitation of range of motion and functional improvement.

Design: Prospective, randomized, case-control study.

Setting: Tertiary care and teaching hospital.

Participants: 180 patients of both the sexes in age group of more than 18 years satisfying the inclusion and exclusion criteria were randomized into three groups.

Intervention: Patients in group A were given one injection of PRP by anterior approach with home exercise therapy. Patients in group B were given one 2 ml injection of Corticosteroid injection by anterior approach with home exercise therapy. Patients in group C were given Ultrasonic Therapy for 7 minutes for 7 sittings with home exercise therapy.

Outcome measures: Patients were assessed in terms of improvement in Range of Motion, VAS, SPADI and DASH scores. The indices were measured at 0 weeks (pre-treatment); 3 weeks, 6 weeks, 12 weeks (follow-up).

Results and outcomes: The statistical analysis of the study shall be done and the results will be presented at the conference.

O26

Effect of suprascapular nerve block with lignocaine under USG guidance in periarthritic shoulder on pain & range of motion

Simmi

Objective of the study: The effect of suprascapular nerve block with lignocaine under USG guidance in periarthritic shoulder on pain & range of motion.

Method used: Patients with idiopathic periarthritis shoulder attending PMR OPD from 1/November/2011 to 31/August/ 2012 were assessed for pain and restriction of range of motion with standard scales (goniometry and visual analog scale). These were measured subsequently on weekly basis for 1month,then,once in 2 weeks for second month.The results were analyzed and discussed.

Results : Three major groups of patients were those with - Rotator cuff disease, Stroke and Idiopathic. Earlier illnesses responded satisfactorily to SSNB, while late patients showed lesser response. Evenin the latter group the favorable response was statistically significant.

Conclusion: SSNB under US guidance is a good interventional option in periarthritis shoulder.

O27

Hydrodilation in adhesive capsulitis of shoulder

Singh Yesh Veer[1], Vishal Jayant[2], Biswas M M[3], Saha Jayant[4]

[1]2nd Year DNB-PGT (PMR), Sambhunath Pandit Hospital Kolkata-20.
[2]2nd Year DMRD-PGT, IPGMR & SSKM Hospital Kolkata-20.
[3]MD (AIIMS), DNB, MNAMS, Sr. consultant, SNP Hospital Kolkata-20.
[4]MD (PMR), Consultant, SNP Hospital Kolkata-20

Study Design: Prospective study

Objective: To study the efficacy of USG guided hydrodilation in case of adhesive capsulitis of shoulder.

Materials and Methods: 22 patients with adhesive capsulitis of the shoulder, not responded to 3 months conservative treatment (SPADI<10) were recruited for study after taking informed consent from patient. Patients were divided in to 2 groups. First group were treated with USG guided hydrodilation (by Normal saline & Bupivacaine) and followed by physical therapy and second group with physical therapy only. We were prospectively followed-up and clinically assessed at 2, 6 &12weeks. SPADI, disability index, pain index and passive ROM were used as outcome measures.

Result: Hydrodilation produces faster resolution of pain and disability than physical therapy only.

Conclusion: From this study it is concluded that hydrodilation with physical therapy produce fast recovery in adhesive capsulitis of the shoulder as compared to physical therapy only. From this small study, hydrodilation is proved as a safe and effective treatment option for refractory case of adhesive capsulitis.

Keywords: Physical therapy, Hydrodilation.

O28

Non surgical management of rotator cuff tear

Mandal Prabir[1], Dan Sudip[2], Ballav Ambar[3]

[1]DNB, PGT (Final year) Shambhu Nath Pandit Hospital Kolkata,
[2]RMO, R G Kar Medical College, Kolakta,
[3]Ex- HOD, PMR, SSKM Hospital.

Rotator Cuff tears are amongst the most common pathological condition affecting the shoulder. Supraspinatus tendon is most frequently torn. Rotator cuff tears increase in incidence with age and less frequently they occur due to trauma. Sudden trauma or chronic overuse with repetitive overhead motion with internal or external rotation is probably mechanism of injury. A study was conducted in Sambhunath Pandit hospital and SSKM hospital Kolkata in the department of Physical Medicine and Rehabilitation (PMR) from March 2010 to august 2011. Two sample groups were selected, each having thirty seven subjects. The study was undertaken to evaluate the efficacy of nonsurgical rehabilitative management in rotator cuff tear. Also we have evaluated the effect of therapeutic exercise versus therapeutic exercise and ultrasound therapy. Rehabilitation in rotator cuff tear is aimed at managing impairment and minimizing disability. As a physiatrist, we have tried to provide a cost effective non surgical physiatric management so that residual disability is minimized and quality of life is improved. Regarding the incidence, bilateral involvement is more common. Also equal incidence is noted in both sexes .Housewives are affected most commonly but farmers, carpenters and manual labours are also significantly affected.

Keywords: Rotator cufftear, Supraspinatus tendon, Physiatric management, Ultrsound therapy(UST), Therapeutic exercise, Quality of life (QOL).

O29

Prolotherapy versus corticosteroid injections for the treatment of plantar fasciitis: a randomized controlled trial

Sharma Sanjeev Kumar, Dheeraj A, Yadav S L, Singh U

Dept. of PMR, AIIMS

Chronic plantar fasciitis is a degenerative tissue condition and one of the mostcommon causes of foot pain requiring professional care among adults. In this study we have compared improvement in pain and foot function in patients withchronic plantar fasciitis following P2G (prolotherapy) versus Triamcinolone acetonide injections.

Study place: Dept. of PM&R, IPGME&R, Kolkata.

Duration : 6 months (from 1st March, 2012 to 31st August 2012)

Sample size: 36

Inclusion criteria:

1. Patient with clinical diagnosis of CTS
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Methodology: After getting institutional ethical committee clearance, all patients who fulfil the above criteria are included in the study & further diagnostic conformation done by the standard diagnostic criteria of NCS. The same group of patient have been also screened for radiological entrapment criteria for CTS.

Results: At the end of the study, the data were analysed by statistical tools shows that

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Setting: Department of PMR, RIMS, Imphal

Participants: One hundred clinically diagnosed lumbar PIVD patients from September 2010 to March 2012

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Result: Hydrodilation produces faster resolution of pain and disability than physical therapy only.

Conclusion: From this study it is concluded that hydrodilation with physical therapy produce fast recovery in adhesive capsulitis of the shoulder as compared to physical therapy only. From this small study, hydrodilation is proved as a safe and effective treatment option for refractory case of adhesive capsulitis.

Keywords: Physical therapy, Hydrodilation.

O28

Non surgical management of rotator cuff tear

Mandal Prabir[1], Dan Sudip[2], Ballav Ambar[3]

[1]DNB, PGT (Final year) Shambhu Nath Pandit Hospital Kolkata,
[2]RMO, R G Kar Medical College, Kolakta,
[3]Ex- HOD, PMR, SSKM Hospital.

Rotator Cuff tears are amongst the most common pathological condition affecting the shoulder. Supraspinatus tendon is most frequently torn. Rotator cuff tears increase in incidence with age and less frequently they occur due to trauma. Sudden trauma or chronic overuse with repetitive overhead motion with internal or external rotation is probably mechanism of injury. A study was conducted in Sambhunath Pandit hospital and SSKM hospital Kolkata in the department of Physical Medicine and Rehabilitation (PMR) from March 2010 to august 2011. Two sample groups were selected, each having thirty seven subjects. The study was undertaken to evaluate the efficacy of nonsurgical rehabilitative management in rotator cuff tear. Also we have evaluated the effect of therapeutic exercise versus therapeutic exercise and ultrasound therapy. Rehabilitation in rotator cuff tear is aimed at managing impairment and minimizing disability. As a physiatrist, we have tried to provide a cost effective non surgical physiatric management so that residual disability is minimized and quality of life is improved. Regarding the incidence, bilateral involvement is more common. Also equal incidence is noted in both sexes .Housewives are affected most commonly but farmers, carpenters and manual labours are also significantly affected.

Keywords: Rotator cufftear, Supraspinatus tendon, Physiatric management, Ultrsound therapy(UST), Therapeutic exercise, Quality of life (QOL).

O29

Prolotherapy versus corticosteroid injections for the treatment of plantar fasciitis: a randomized controlled trial

Sharma Sanjeev Kumar, Dheeraj A, Yadav S L, Singh U

Dept. of PMR, AIIMS

Chronic plantar fasciitis is a degenerative tissue condition and one of the mostcommon causes of foot pain requiring professional care among adults. In this study we have compared improvement in pain and foot function in patients withchronic plantar fasciitis following P2G (prolotherapy) versus Triamcinolone acetonide injections.

Design: Prospective, randomized, case-control study.

Setting: Tertiary care and teaching hospital.

Participants: 180 patients of both the sexes in age group of more than 18 years satisfying the inclusion and exclusion criteria were randomized into three groups.

Intervention: Patients in group A were given one injection of PRP by anterior approach with home exercise therapy. Patients in group B were given one 2 ml injection of Corticosteroid injection by anterior approach with home exercise therapy. Patients in group C were given Ultrasonic Therapy for 7 minutes for 7 sittings with home exercise therapy.

Outcome measures: Patients were assessed in terms of improvement in Range of Motion, VAS, SPADI and DASH scores. The indices were measured at 0 weeks (pre-treatment); 3 weeks, 6 weeks, 12 weeks (follow-up).

Results and outcomes: The statistical analysis of the study shall be done and the results will be presented at the conference.

O26

Effect of suprascapular nerve block with lignocaine under USG guidance in periarthritic shoulder on pain & range of motion

Simmi

Objective of the study: The effect of suprascapular nerve block with lignocaine under USG guidance in periarthritic shoulder on pain & range of motion.

Method used: Patients with idiopathic periarthritis shoulder attending PMR OPD from 1/November/2011 to 31/August/ 2012 were assessed for pain and restriction of range of motion with standard scales (goniometry and visual analog scale). These were measured subsequently on weekly basis for 1month,then,once in 2 weeks for second month.The results were analyzed and discussed.

Results : Three major groups of patients were those with - Rotator cuff disease, Stroke and Idiopathic. Earlier illnesses responded satisfactorily to SSNB, while late patients showed lesser response. Evenin the latter group the favorable response was statistically significant.

Conclusion: SSNB under US guidance is a good interventional option in periarthritis shoulder.

O27

Hydrodilation in adhesive capsulitis of shoulder

Singh Yesh Veer[1], Vishal Jayant[2], Biswas M M[3], Saha Jayant[4]

[1]2nd Year DNB-PGT (PMR), Sambhunath Pandit Hospital Kolkata-20.
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Methodology: A double-blind randomized controlled trial was performed atDepartment of PMR, AIIMS, New Delhi with 10 participating adults with at least 3months of refractory plantar fasciitis. The participants were randomized to eithergroup using random number tables. Prolotherapy group received injection of 1ml P2G solution (phenol 1.2%, glycerine 12.5%, and dextrose 12.5% in sterile water).Steroid group received 1ml Triamcinolone acetonide injectable suspension 10mg/ml.

Outcome Measures: The primary outcome measures used were resting heel pain(0–10 Likert scale) and foot function index. Secondary outcome measure used wastablet count chart. Each was recorded at baseline, 4 and 12 weeks.

Results: The subjects who received prolotherapy reported to have improvementboth in pain scores (7.32±1.1 and 4.08±1.0 versus 7.32±1.2 and 5.75±1.0 atbaseline and 4 weeks, respectively) and foot function scores (48.21±14.9 and16.65±5.6 versus 40.98±12.1 and 26.85±3.4 at baseline and 4 weeks, respectively)as compared to steroid group. Wilcoxon rank-sum (Mann-Whitney) test revealed astatistically significant improvement ($p<0.05$) with prolotherapy injections alone aswell as in comparison to steroid group among both outcome measures at 1 month.The prolotherapy subjects also reported to have reduced analgesic tablet intake($p<0.05$) as compared to steroid group. Results at 12 weeks are still awaited.

However, in both the treatment group there were no adverse events seen.

Conclusions: Prolotherapy with P2G solution was more effective in decreasing heelpain and improving foot function in subjects with refractory plantar fasciitis ascompared to Steroid injections.

O30

ALS functional rating scale, pulmonary function tests and speech like tasks – a follow up study on 17 patients with sporadic amyotrophic lateral sclerosis (ALS)

Yamini B K

Introduction and Objective of the Study: Sporadic ALS is a progressive neurodegenerative disease wherein dysarthria is a common symptom. This study looks at a few measures related to speech in these patients in due course of the disease.

Method: 17 adults with ALS (11 spinal onset and 6 bulbar onset; revised El Escorial criteria) out of 76 patients came for a follow up for a period of one year. 10 parameters i.e. Speech related subdivisions of ALS Functional Rating Scale (ALSFRS-Speech, Salivation, Swallowing and Breathing), Pulmonary Function Tests (Forced Vital Capacity and Maximum Voluntary Ventilation; %) and Measures of maximum performance of speech like tasks {Diadochokinetic rate (syllables/sec): DDK [pa], [ta], [ka] and [pataka]}) were assessed at entry (baseline) and during each of their follow-ups.

Results: Statistically significant difference ($p<0.05$) between the baseline assessment (b/l) and the follow-up, with the follow-up having lower score, was observed on two parameters i.e. Speech score on ALSFRS and DDK [pataka]. The speech score on ALSFRS showed a significant difference ($p=0.041$) when the performance at b/l was compared with performance after 12 months. On the task of DDK [pataka], two comparisons showed a significant difference i.e. in Comparison between b/l vs. 2 months post b/l ($p=0.026$) and in the comparison between b/l vs. 12 months post b/l ($p=0.011$). Although statistical significance could not be established for the rest of the parameters, in most of them, the mean at any of the follow-ups was lower than at the b/l.

Conclusion: Reduction in DDK [pataka] rate suggests progression in dysarthria. Lesser score of speech on ALSFRS on follow up suggests that alternative and augmentative communication would be the need in due course for these patients as the relentless disease progresses.

O31

Indwelling catheter related pressure ulcer in groin in a tetraplegic patient: a case report

Singh L Nilachandra[1], Sangme Ngampa[2], Singh Th Khelendro[3], Mohes A S[4], Singh A K Joy[5]

[1]MD, Assistant Professor, [2,3,4]Postgraduate students; [5]MD, DNB, PhD, Professor & Head

Department of PMR, RIMS, Imphal

Ulcer prevention and its management has been a challenge in the practice of Rehabilitation Medicine and more so, with the tetraplegic subjects. We herein report a case of a 42 year old tetraplegic male, who presented with multiple pressure ulcers and atypical Grade-II ulcer in the right groin due to mismanagement of indwelling urethral catheter. The primary aim of this report is to highlight an unusual and potentially preventable complication of indwelling urethral catheter in patients with SCI. Groin is extremely an unusual site for ulcer and no similar case has been previously reported with an ulcer in the groin in a spinal cord injury (SCI) patients. This case highlights the importance of proper positioning of indwelling urethral catheter, its care, and prevention of medical devices related (iatrogenic) complications in patients undergoing treatment.

Conclusion: An improperly positioned indwelling urethral catheter may result in ulcers from pressure or constant soiling over the thighs in patients with SCI. Absence of sensation, weakness of both the legs and lack of knowledge about indwelling catheter care contributed to this ulcer formation. Hence it is important to properly position the indwelling urethral catheters.

O32

Functional outcome of a new rehabilitation approach in severe cerebral palsy (GMFCS IV and V)

Sharan Deepak

Department of Orthopaedics and Rehabilitation, RECOUP Neuromusculoskeletal Rehabilitation Centre, Bangalore, India.

Objectives of Investigation: Children with Cerebral Palsy (CP) with Gross Motor Classification System (GMFCS) levels of IV and V are non-ambulatory and at a greater risk of complications such as osteopenia, low energy fractures, hip displacement and musculoskeletal pain. Prevention of these complications requires that these children are made ambulant with or without support. However, the recommended rehabilitation strategy at present for these groups is wheel chair aided mobility leading to a “Catch 22” situation. The purpose of the study was to find out the outcome of Single Event Multilevel Lever Arm Restoration and Anti Spasticity Surgery (SEMLARASS) and rehabilitation in children with CP with GMFCS levels IV and V.

Design: Prospective, randomized, case-control study.

Setting: Tertiary care and teaching hospital.

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O30

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Introduction and Objective of the Study: Sporadic ALS is a progressive neurodegenerative disease wherein dysarthria is a common symptom. This study looks at a few measures related to speech in these patients in due course of the disease.

Method: 17 adults with ALS (11 spinal onset and 6 bulbar onset; revised El Escorial criteria) out of 76 patients came for a follow up for a period of one year. 10 parameters i.e. Speech related subdivisions of ALS Functional Rating Scale (ALSFRS-Speech, Salivation, Swallowing and Breathing), Pulmonary Function Tests (Forced Vital Capacity and Maximum Voluntary Ventilation; %) and Measures of maximum performance of speech like tasks {Diadochokinetic rate (syllables/sec): DDK [pa], [ta], [ka] and [pataka]}) were assessed at entry (baseline) and during each of their follow-ups.

Results: Statistically significant difference ($p<0.05$) between the baseline assessment (b/l) and the follow-up, with the follow-up having lower score, was observed on two parameters i.e. Speech score on ALSFRS and DDK [pataka]. The speech score on ALSFRS showed a significant difference ($p=0.041$) when the performance at b/l was compared with performance after 12 months. On the task of DDK [pataka], two comparisons showed a significant difference i.e. in Comparison between b/l vs. 2 months post b/l ($p=0.026$) and in the comparison between b/l vs. 12 months post b/l ($p=0.011$). Although statistical significance could not be established for the rest of the parameters, in most of them, the mean at any of the follow-ups was lower than at the b/l.

Conclusion: Reduction in DDK [pataka] rate suggests progression in dysarthria. Lesser score of speech on ALSFRS on follow up suggests that alternative and augmentative communication would be the need in due course for these patients as the relentless disease progresses.

O31

Indwelling catheter related pressure ulcer in groin in a tetraplegic patient: a case report

Singh L Nilachandra[1], Sangme Ngampa[2], Singh Th Khelendro[3], Mohes A S[4], Singh A K Joy[5]

[1]MD, Assistant Professor, [2,3,4]Postgraduate students; [5]MD, DNB, PhD, Professor & Head

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Conclusion: An improperly positioned indwelling urethral catheter may result in ulcers from pressure or constant soiling over the thighs in patients with SCI. Absence of sensation, weakness of both the legs and lack of knowledge about indwelling catheter care contributed to this ulcer formation. Hence it is important to properly position the indwelling urethral catheters.

O32

Functional outcome of a new rehabilitation approach in severe cerebral palsy (GMFCS IV and V)

Sharan Deepak

Department of Orthopaedics and Rehabilitation, RECOUP Neuromusculoskeletal Rehabilitation Centre, Bangalore, India.

Objectives of Investigation: Children with Cerebral Palsy (CP) with Gross Motor Classification System (GMFCS) levels of IV and V are non-ambulatory and at a greater risk of complications such as osteopenia, low energy fractures, hip displacement and musculoskeletal pain. Prevention of these complications requires that these children are made ambulant with or without support. However, the recommended rehabilitation strategy at present for these groups is wheel chair aided mobility leading to a “Catch 22” situation. The purpose of the study was to find out the outcome of Single Event Multilevel Lever Arm Restoration and Anti Spasticity Surgery (SEMLARASS) and rehabilitation in children with CP with GMFCS levels IV and V.

Methodology: A double-blind randomized controlled trial was performed atDepartment of PMR, AIIMS, New Delhi with 10 participating adults with at least 3months of refractory plantar fasciitis. The participants were randomized to eithergroup using random number tables. Prolotherapy group received injection of 1ml P2G solution (phenol 1.2%, glycerine 12.5%, and dextrose 12.5% in sterile water).Steroid group received 1ml Triamcinolone acetonide injectable suspension 10mg/ml.

Outcome Measures: The primary outcome measures used were resting heel pain(0–10 Likert scale) and foot function index. Secondary outcome measure used wastablet count chart. Each was recorded at baseline, 4 and 12 weeks.

Results: The subjects who received prolotherapy reported to have improvementboth in pain scores (7.32±1.1 and 4.08±1.0 versus 7.32±1.2 and 5.75±1.0 atbaseline and 4 weeks, respectively) and foot function scores (48.21±14.9 and16.65±5.6 versus 40.98±12.1 and 26.85±3.4 at baseline and 4 weeks, respectively)as compared to steroid group. Wilcoxon rank-sum (Mann-Whitney) test revealed astatistically significant improvement ($p<0.05$) with prolotherapy injections alone aswell as in comparison to steroid group among both outcome measures at 1 month.The prolotherapy subjects also reported to have reduced analgesic tablet intake($p<0.05$) as compared to steroid group. Results at 12 weeks are still awaited.

However, in both the treatment group there were no adverse events seen.

Conclusions: Prolotherapy with P2G solution was more effective in decreasing heelpain and improving foot function in subjects with refractory plantar fasciitis ascompared to Steroid injections.

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O31

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Methods Used: 170 children with GMFCS V & IV (mean age 9.68±4.77) participated in this study. The surgical procedures were performed by a single Orthopaedic Surgeon which included Intramuscular Release and Controlled Tendon Lengthening using the principles of Orthopaedic Selective Spasticity Control Surgery and simultaneous restoration of lever arm dysfunctions and was followed by protocol based, sequenced multidisciplinary rehabilitation for an average of 6 months. The outcome measures such as component of GMFM-88, Functional Mobility Scale (FMS), Physicians Rating Scale (PRS), Manual Ability Classification System (MACS) were used to compare the functional status of the child before and after the surgery and rehabilitation.

Results: The results showed a significant improvement in all GMFM-88 components. The result of Pre-Post PRS evaluation showed a significant improvement for both sides (Right: t-8.60, (P<0.001); Left: t-9.21, (P<0.001). The improvement in the MACS (Right: t-4.05 (P<0.001); Left: t-5.74 (P<0.001) and FMS (t-5.46 (P<0.001) were also significant among both GMFCS V and IV.

Conclusion: A well-planned and executed SEMLARASS, followed by intensive protocol based rehabilitation, in the context of a multi-disciplinary team, provides the person with GMFCS levels IV and V a significant functional improvement.

O33

Study of correlation between neurological level of spinal injury and bladder functions as detected by urodyanamic study

Aggarwal Mahima

Study design and subjects: Analytical study

Objectives: To study the correlation between neurological level of spinal injury and bladder functions as detected by urodyanamic study.

Methods: Seventy individuals with traumatic spinal cord injury (SCI) admitted to the department of Physical Medicine and Rehabilitation, S.M.S. medical college and hospital, Jaipur, were include in the study. Detailed clinical, neurological evaluation as per American Spinal Injury Association Classification (ASIA) and radiological assessment were done along with clinical examination of bladder and urodyanamic study for evaluation of bladder behavior.

Results: Out of sixty five patients with suprasacral injuries, 53(81.5%) demonstrated hyperreflexia with or without detrusor sphincter dyssynergia, 6(9.2%) detrusor areflexia, and 6(9.2%) had normal bladders, 28(43.1%) had low compliance (less than 12.5ml/cm H2O) and 47(72.30%) had high detrusor leak pint pressures (greater than 40 cm H2O). Of the 5 patients with sacral injuries, 1(20%) had detrusor hyperreflexia, 4(80%) had detrusor areflexia, 1(20%) had low bladder compliance and all 5(100%) had high detrusor leak point pressures.

Conclusions: The correlation between somatic neurologic findings or spinal imaging studies and urodyanamic findings in patients with spinal cord injury is not exact. Therefore, bladder management should not completely rely only on clinical bladder evaluation and neurological examination alone, but should always include Urodyanamic studies.

Keywords: Dyssynergia, Detrusor, Bladder, Spinal cord injury (SCI), Urodyanamic study

O34

Study to assess non-invasively the cardiac autonomic dysfunction in patients with chronic spinal cord injury (SCI)

Naveen B P

Abstract: The objective of the study was to assess non-invasively the cardiac autonomic dysfunction in patients with chronic spinal cord injury (SCI). 14 male patients with chronic SCI and a neurologically complete lesion with a neurological level of T6 or above were included. An equal number of age and sex matched healthy individuals were the controls. Short term ECG recording for a duration of 5-min was done followed by offline analysis of the data. Mann-Whitney test was used to compare the patients with the controls and Wilcoxon matched-pairs signed-ranks test for within the group analysis. Heart rate variability analysis showed a significantly decreased absolute power in the low frequency and high frequency components in the SCI group in sitting position as compared to that of controls. No significant differences were noted in the frequency domain between SCI patients and controls in supine position, as well as within the SCI patients on changing of position from supine to sitting. The controls showed a significantly increased LF:HF (low frequency:high frequency) ratio on change of position from supine to sitting. The autonomic dysfunction in SCI patients was appreciated on provocation.

O35

Effectiveness of breathing exercises on pulmonary function of traumatic quadriplegic and high paraplegic patients

Sajeena A S[1], Sreekala V K[2], Surendran A[3]
[2]Professor & Head, [3]Additional Professor
Dept. of PM&R, Medical College, Thiruvananthapuram.

Aims and objectives: The ***primary*** objective of the study is to test the effectiveness of breathing exercises in improving the pulmonary function of traumatic quadriplegic and high paraplegic patients.

The ***secondary*** objective is to assess the basal pulmonary function of traumatic quadriplegic and high paraplegic patients.

This is a ***hospital based interventional study*** conducted in a population of Traumatic Spinal Cord injured patients with lesions at/above neurological level-T_6, diagnosed clinically and/or radiologically(six weeks after the injury). Study population of sample size n=10, consisted of patients attending the Department of PM&R, MCH, TVM, during the period from July2012 to December 2012. Informed consent obtained.

Initially the patients are evaluated by *history (using a proforma) &Clinical Examination usingBed side Pulmonary tests* (*Single Breath Count, Incentive Spirometer, Candle test)&*

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Objectives of Investigation: Children with Cerebral Palsy (CP) with Gross Motor Classification System (GMFCS) levels of IV and V are non-ambulatory and at a greater risk of complications such as osteopenia, low energy fractures, hip displacement and musculoskeletal pain. Prevention of these complications requires that these children are made ambulant with or without support. However, the recommended rehabilitation strategy at present for these groups is wheel chair aided mobility leading to a “Catch 22” situation. The purpose of the study was to find out the outcome of Single Event Multilevel Lever Arm Restoration and Anti Spasticity Surgery (SEMLARASS) and rehabilitation in children with CP with GMFCS levels IV and V.

Methods Used: 170 children with GMFCS V & IV (mean age 9.68±4.77) participated in this study. The surgical procedures were performed by a single Orthopaedic Surgeon which included Intramuscular Release and Controlled Tendon Lengthening using the principles of Orthopaedic Selective Spasticity Control Surgery and simultaneous restoration of lever arm dysfunctions and was followed by protocol based, sequenced multidisciplinary rehabilitation for an average of 6 months. The outcome measures such as component of GMFM-88, Functional Mobility Scale (FMS), Physicians Rating Scale (PRS), Manual Ability Classification System (MACS) were used to compare the functional status of the child before and after the surgery and rehabilitation.

Results: The results showed a significant improvement in all GMFM-88 components. The result of Pre-Post PRS evaluation showed a significant improvement for both sides (Right: t-8.60, (P<0.001); Left: t-9.21, (P<0.001). The improvement in the MACS (Right: t-4.05 (P<0.001); Left: t-5.74 (P<0.001) and FMS (t-5.46 (P<0.001) were also significant among both GMFCS V and IV.

Conclusion: A well-planned and executed SEMLARASS, followed by intensive protocol based rehabilitation, in the context of a multi-disciplinary team, provides the person with GMFCS levels IV and V a significant functional improvement.

O33

Study of correlation between neurological level of spinal injury and bladder functions as detected by urodyanamic study

Aggarwal Mahima

Study design and subjects: Analytical study

Objectives: To study the correlation between neurological level of spinal injury and bladder functions as detected by urodyanamic study.

Methods: Seventy individuals with traumatic spinal cord injury (SCI) admitted to the department of Physical Medicine and Rehabilitation, S.M.S. medical college and hospital, Jaipur, were include in the study. Detailed clinical, neurological evaluation as per American Spinal Injury Association Classification (ASIA) and radiological assessment were done along with clinical examination of bladder and urodyanamic study for evaluation of bladder behavior.

Results: Out of sixty five patients with suprasacral injuries, 53(81.5%) demonstrated hyperreflexia with or without detrusor sphincter dyssynergia, 6(9.2%) detrusor areflexia, and 6(9.2%) had normal bladders, 28(43.1%) had low compliance (less than 12.5ml/cm H2O) and 47(72.30%) had high detrusor leak pint pressures (greater than 40 cm H2O). Of the 5 patients with sacral injuries, 1(20%) had detrusor hyperreflexia, 4(80%) had detrusor areflexia, 1(20%) had low bladder compliance and all 5(100%) had high detrusor leak point pressures.

Conclusions: The correlation between somatic neurologic findings or spinal imaging studies and urodyanamic findings in patients with spinal cord injury is not exact. Therefore, bladder management should not completely rely only on clinical bladder evaluation and neurological examination alone, but should always include Urodyanamic studies.

Keywords: Dyssynergia, Detrusor, Bladder, Spinal cord injury (SCI), Urodyanamic study

O34

Study to assess non-invasively the cardiac autonomic dysfunction in patients with chronic spinal cord injury (SCI)

Naveen B P

Abstract: The objective of the study was to assess non-invasively the cardiac autonomic dysfunction in patients with chronic spinal cord injury (SCI). 14 male patients with chronic SCI and a neurologically complete lesion with a neurological level of T6 or above were included. An equal number of age and sex matched healthy individuals were the controls. Short term ECG recording for a duration of 5-min was done followed by offline analysis of the data. Mann-Whitney test was used to compare the patients with the controls and Wilcoxon matched-pairs signed-ranks test for within the group analysis. Heart rate variability analysis showed a significantly decreased absolute power in the low frequency and high frequency components in the SCI group in sitting position as compared to that of controls. No significant differences were noted in the frequency domain between SCI patients and controls in supine position, as well as within the SCI patients on changing of position from supine to sitting. The controls showed a significantly increased LF:HF (low frequency:high frequency) ratio on change of position from supine to sitting. The autonomic dysfunction in SCI patients was appreciated on provocation.

O35

Effectiveness of breathing exercises on pulmonary function of traumatic quadriplegic and high paraplegic patients

Sajeena A S[1], Sreekala V K[2], Surendran A[3]
[2]Professor & Head, [3]Additional Professor
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Aims and objectives: The ***primary*** objective of the study is to test the effectiveness of breathing exercises in improving the pulmonary function of traumatic quadriplegic and high paraplegic patients.

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This is a ***hospital based interventional study*** conducted in a population of Traumatic Spinal Cord injured patients with lesions at/above neurological level-T_6, diagnosed clinically and/or radiologically(six weeks after the injury). Study population of sample size n=10, consisted of patients attending the Department of PM&R, MCH, TVM, during the period from July2012 to December 2012. Informed consent obtained.

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-Objective assessment with Pulmonary Function Test (using Spirometer): the most important parameters used include FVC(Forced Vital Capacity), FEV_1 (Forced Expiratory Volume in one second) & MVV (Maximum Voluntary Ventilation)

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O36

Pregabalin, gabapentin or oxcarbazepine in neuropathic pain?

Sumalatha K B

Neuropathic pain affects more than 2-3% of general population. Pain as described by IASP is "initiated or caused by a primary lesion or dysfunction in the nervous system". Even though there are various groups of drugs available to treat neuropathic pain; and only a few direct comparison studies between these drugs are available which puts us in a dilemma as to which drug to prefer. In this study, we have tried to assess the efficacy and tolerability of the commonly used neuropathic analgesics like Pregabalin, Gabapentin and Oxcarbazepine. The neuropathic pain can be acute onset or chronic nature; we have included neuropathic pain of PIVD or LCS origin to avoid many confounding factors. This is a prospective study done on OPD patients in Dept. of PMR, AIIMS, New Delhi. The primary outcome measure is pain intensity (0-10 on a numerical rating scale) at baseline and at 2 weeks of starting the drug, and secondary outcome measure is maximum tolerated dose of study drug and short form McGill pain questionnaire (SF-MPQ). Though Pregabalin is effective with simple dosing titration, Gabapentin is more cost effective and Oxcarbazepine is found to have similar clinical efficacy with lesser side effects than Pregabalin.

O37

Study of effects of botulinum toxin – A injection on spastic upper limb

Ranjan Amit

Objective: To study the effects of Botulinum toxin-A injection on spastic upper limb.

Method: A prospective follow up study was conducted on consecutive 10 patients with upper limb spasticity attending PMR OPD of VMMC & Safdarjang Hospital. Detailed assessment was done before & after injection Botulinum toxin A, including detailed medical history, assessment of hand functions and grade of spasticity. Follow up was done at 1 month and 3 months. Regular exercise therapy and use of suitable orthosis were continued and encouraged.

Result: There was significant reduction in spasticity of treated muscles and improvement in range of motion in the 12-week period. In addition,7 out of 10 patients reported improved 'comfort' with comparatively 'lighter limb' and increased ease in many activities of daily living including dressing, putting on orthosis, cleaning/drying palm, cutting fingernails, releasing object after grasping. There were no significant side effects of the injection.

Conclusion: Role of Botulinum Toxin A inection is well established for anti-spastic use. Along with decreased spasticity and improved range of motion, other useful effects observed were improved comfort with 'lighter limb' and easier maintenance of hand hygiene.

\O38

Clinical and imaging evaluation of efficacy of hyaluronic acid in osteoarthritis knee

Nandi Jaydeep

Objective: To review the clinical as well as disease modifying efficacy of injection hyaluronic acid in osteoarthritis knee.

Method: 30 patients with OA knee (total 55 knees) were given weekly injections of HA for 3 weeks at Safdarjang Hospital, New Delhi. Patients were followed up for 6 months. Symptomatic efficacy parameter was **WOMAC**(Western Ontario and McMaster Universities Index of Osteoarthritis)index assessed on baseline (day 0), day 45, day 90 and day 180. Disease modifying efficacy parameter was MRI based **WORMS** (Whole-organ Magnetic Resonence Imaging Score**)** criteria assessed at baseline (day 0) and at the end of trial (180 days).

Result: Mean **WOMAC** scoreimproved from 97.67±21.37 at baseline to 61.03±24.79 at 6 months (p=0.0001). The mean **WORM Scartilage score** in MFTJ (medial femoro-tibial joint), LFTJ (lateral femoro-tibial joint) and PFJ (patella-femoral joint) remain close to baseline. But, mean **WORM Sbone marrowedema** and **bone cystscores** showed significant improvement in all 3 zones described.

Conclusion: Cartilage integrity score at 6 months remains close to baseline value, which implies a reduced rate of cartilage destruction after injection of HA though there is no regrowth of cartilage as such. Bone marrow edema and bone cyst scores showed significant improvement in all zones, which might be the reason behind the improvement in pain per se in most of the patient on visco-supplementation. Also, x-ray grading appears to be correlating well with the MRI. Cartilage destruction was more among overweight persons and improvement in cartilage score was significant only in grade II OA knee.

O39

Efficacy of lateral wedging in footwear in medial compartment osteoarthritis knee

Badhal Suman

Introduction: In Knee osteoarthritis (OA) Shoe modifications, such as lateral-wedge insoles or shock absorbing shoes with insoles, have been recommended for conservative therapy of mild knee OA but with little objective data.

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Methods: 54 patients fulfilling the inclusion criteria after Informed consent of patients were enrolledand divided intointervention group A (29) and nonintervention or control group B (25) with random allocation. Paired t-test, WILCOXON SIGN RANK TEST and MAN WITENEY U test were applied at significant p-value of <0.05%.

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[2]Professor & Head, [3]Additional Professor
Dept. of PM&R, Medical College, Thiruvananthapuram.

Aims and objectives: The ***primary*** objective of the study is to test the effectiveness of breathing exercises in improving the pulmonary function of traumatic quadriplegic and high paraplegic patients.

The ***secondary*** objective is to assess the basal pulmonary function of traumatic quadriplegic and high paraplegic patients.

This is a ***hospital based interventional study*** conducted in a population of Traumatic Spinal Cord injured patients with lesions at/above neurological level-T_6, diagnosed clinically and/or radiologically(six weeks after the injury). Study population of sample size n=10, consisted of patients attending the Department of PM&R, MCH, TVM, during the period from July2012 to December 2012. Informed consent obtained.

Initially the patients are evaluated by *history (using a proforma) &Clinical Examination usingBed side Pulmonary tests* (*Single Breath Count, Incentive Spirometer, Candle test)&*

-Objective assessment with Pulmonary Function Test (using Spirometer): the most important parameters used include FVC(Forced Vital Capacity), FEV_1 (Forced Expiratory Volume in one second) & MVV (Maximum Voluntary Ventilation)

Inspiratory breathing exercise using the Incentive Spirometer will be given to the study population (15 minutes thrice daily for 6 weeks). The change in the clinical and objective parameters of PFT will be assessed after 6 weeks.

The results will be analysed using the values of *Mean, Median and Standard Deviation (Quantitative variables)* & using *proportion (Qualitativevariables).* The study is under progression now.

O36

Pregabalin, gabapentin or oxcarbazepine in neuropathic pain?

Sumalatha K B

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Result: There was significant reduction in spasticity of treated muscles and improvement in range of motion in the 12-week period. In addition,7 out of 10 patients reported improved 'comfort' with comparatively 'lighter limb' and increased ease in many activities of daily living including dressing, putting on orthosis, cleaning/drying palm, cutting fingernails, releasing object after grasping. There were no significant side effects of the injection.

Conclusion: Role of Botulinum Toxin A inection is well established for anti-spastic use. Along with decreased spasticity and improved range of motion, other useful effects observed were improved comfort with 'lighter limb' and easier maintenance of hand hygiene.

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Objective: To review the clinical as well as disease modifying efficacy of injection hyaluronic acid in osteoarthritis knee.

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Result: Mean **WOMAC** scoreimproved from 97.67±21.37 at baseline to 61.03±24.79 at 6 months (p=0.0001). The mean **WORM Scartilage score** in MFTJ (medial femoro-tibial joint), LFTJ (lateral femoro-tibial joint) and PFJ (patella-femoral joint) remain close to baseline. But, mean **WORM Sbone marrowedema** and **bone cystscores** showed significant improvement in all 3 zones described.

Conclusion: Cartilage integrity score at 6 months remains close to baseline value, which implies a reduced rate of cartilage destruction after injection of HA though there is no regrowth of cartilage as such. Bone marrow edema and bone cyst scores showed significant improvement in all zones, which might be the reason behind the improvement in pain per se in most of the patient on visco-supplementation. Also, x-ray grading appears to be correlating well with the MRI. Cartilage destruction was more among overweight persons and improvement in cartilage score was significant only in grade II OA knee.

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Methods: 54 patients fulfilling the inclusion criteria after Informed consent of patients were enrolledand divided intointervention group A (29) and nonintervention or control group B (25) with random allocation. Paired t-test, WILCOXON SIGN RANK TEST and MAN WITENEY U test were applied at significant p-value of <0.05%.

Results: the reduction of mean difference in pain on VAS and Likerts scale, improvement *in mean difference in function parameters*the mean reduction of pain in standing/ walking, bending and ascending/ descending at WOMAC scale wassignificantly higher in intervention group. Alsothe mean reduction in the need for NSAIDS was

Methods Used: 170 children with GMFCS V & IV (mean age 9.68±4.77) participated in this study. The surgical procedures were performed by a single Orthopaedic Surgeon which included Intramuscular Release and Controlled Tendon Lengthening using the principles of Orthopaedic Selective Spasticity Control Surgery and simultaneous restoration of lever arm dysfunctions and was followed by protocol based, sequenced multidisciplinary rehabilitation for an average of 6 months. The outcome measures such as component of GMFM-88, Functional Mobility Scale (FMS), Physicians Rating Scale (PRS), Manual Ability Classification System (MACS) were used to compare the functional status of the child before and after the surgery and rehabilitation.

Results: The results showed a significant improvement in all GMFM-88 components. The result of Pre-Post PRS evaluation showed a significant improvement for both sides (Right: t-8.60, (P<0.001); Left: t-9.21, (P<0.001). The improvement in the MACS (Right: t-4.05 (P<0.001); Left: t-5.74 (P<0.001) and FMS (t-5.46 (P<0.001) were also significant among both GMFCS V and IV.

Conclusion: A well-planned and executed SEMLARASS, followed by intensive protocol based rehabilitation, in the context of a multi-disciplinary team, provides the person with GMFCS levels IV and V a significant functional improvement.

O33

Study of correlation between neurological level of spinal injury and bladder functions as detected by urodyanamic study

Aggarwal Mahima

Study design and subjects: Analytical study

Objectives: To study the correlation between neurological level of spinal injury and bladder functions as detected by urodyanamic study.

Methods: Seventy individuals with traumatic spinal cord injury (SCI) admitted to the department of Physical Medicine and Rehabilitation, S.M.S. medical college and hospital, Jaipur, were include in the study. Detailed clinical, neurological evaluation as per American Spinal Injury Association Classification (ASIA) and radiological assessment were done along with clinical examination of bladder and urodyanamic study for evaluation of bladder behavior.

Results: Out of sixty five patients with suprasacral injuries, 53(81.5%) demonstrated hyperreflexia with or without detrusor sphincter dyssynergia, 6(9.2%) detrusor areflexia, and 6(9.2%) had normal bladders, 28(43.1%) had low compliance (less than 12.5ml/cm H2O) and 47(72.30%) had high detrusor leak pint pressures (greater than 40 cm H2O). Of the 5 patients with sacral injuries, 1(20%) had detrusor hyperreflexia, 4(80%) had detrusor areflexia, 1(20%) had low bladder compliance and all 5(100%) had high detrusor leak point pressures.

Conclusions: The correlation between somatic neurologic findings or spinal imaging studies and urodyanamic findings in patients with spinal cord injury is not exact. Therefore, bladder management should not completely rely only on clinical bladder evaluation and neurological examination alone, but should always include Urodyanamic studies.

Keywords: Dyssynergia, Detrusor, Bladder, Spinal cord injury (SCI), Urodyanamic study

O34

Study to assess non-invasively the cardiac autonomic dysfunction in patients with chronic spinal cord injury (SCI)

Naveen B P

Abstract: The objective of the study was to assess non-invasively the cardiac autonomic dysfunction in patients with chronic spinal cord injury (SCI). 14 male patients with chronic SCI and a neurologically complete lesion with a neurological level of T6 or above were included. An equal number of age and sex matched healthy individuals were the controls. Short term ECG recording for a duration of 5-min was done followed by offline analysis of the data. Mann-Whitney test was used to compare the patients with the controls and Wilcoxon matched-pairs signed-ranks test for within the group analysis. Heart rate variability analysis showed a significantly decreased absolute power in the low frequency and high frequency components in the SCI group in sitting position as compared to that of controls. No significant differences were noted in the frequency domain between SCI patients and controls in supine position, as well as within the SCI patients on changing of position from supine to sitting. The controls showed a significantly increased LF:HF (low frequency:high frequency) ratio on change of position from supine to sitting. The autonomic dysfunction in SCI patients was appreciated on provocation.

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significantly lower in intervention group evident from fourth week onward to fifth and sixth week.

Conclusion: Thelateral wedging in shoes in medial joint osteoarthritis is beneficial and it can be cost-effective conservative treatment modalities in early osteoarthritis patients, particularly in developing countries as it can reduces the requirement of NSAIDS and improve functional level of patients by reducing pain in various activities.

O40

Comparison of immediate postoperative prosthesis versus soft dressing in lower limb amputations

Unmesh

Objective: To compare the efficacy of immediate postoperative prosthesis (IPOP) versus soft dressing in lower limb amputations.

Methods: Forty-four transfemoral/ through knee/ transtibial amputees were included in the study. The patients who met the inclusion criteria were randomized into two groups. First group was given an indigenous design of immediate postoperative prosthesis developed by Dr. S. Y. Kothari while second group was given conventional soft dressing. Girth reduction, time duration in wound healing and stump maturation along with severity of residual pain, phantom pain and sensations, complications, if any, were recorded at baseline, at 6 weeks and at 12 weeks respectively.

Results: Rate of wound healing (95.8%) and stump maturation (96%) was much higher in IPOP group as compared to soft dressing group (80% and 65% respectively). Patients in IPOP group reported decreased complaints of residual pain, phantom pain and sensations. Apart from verrucous hyperplasia, no other complications were seen during study period.

Conclusion: Immediate postoperative prosthesis is an effective method for achieving faster control of oedema, residual pain, phantom pain and sensations, wound healing and stump maturation rate.

O41

A comparative study of outcome of rehabilitation exercises in vertigo due to disorders of the middle ear

Saha Jayanta[1], Mukherjee Dipankar[2], Mukherjee Debasish[3]

[1]M.D. (Cal) Sr Consultant & DNB faculty, Dept of PMR, S.N. Pandit Hospital, Kolkata; [2]M.S., Senior Consultant (ENT), Salt Lake S.D. Hospital; [3]M.S., Senior Consultant (ENT), S.N. Pandit Hospital, Kolkata

Abstract: A large variety of patients with vertigo were referred to the department of Physical Medicine & Rehabilitation at Salt Lake S.D. Hospital & S.N. Pandit Hospital from the departments of ENT & Medicine from March 2008 to March 2012. A majority of these patients were suffering from BPPV (Benign Paroxysmal Positional vertigo)(34%). The present study was conducted to assess the role of Brandt-Daroff's exercises in comparison with Cawthorne–Cooksey exercises in the management of vestibular diseases due to BPPV. BPPV was diagnosed by presence of positional vertigo & Dix-Halpike test and subsequently included in the study. Advancement in diagnostic procedures enabled the diagnosis of the cause of vertigo with some certainity but still clinical features had an important role in the diagnosis.

Differential diagnosis: Vestibular neuronitis & acute viral labyrinthitis were the commonest cause of self-limited inner ear conditions.Meniere's disease, perilymphatic fistula & acoustic neuroma were other peripheral causes of vertigo though their incidence was far less.Impairment of proprioceptive & visual input were causes of peripheral vertigo rarely.

In addition to the peripheral causes there were the central causes which came in the differential diagnoses of vertigo. Common causes include stroke & TIA.

After proper evaluation Brandt-Daroff's and Cawthorne-Cooksey exercises were advised for vertigo of BPPV causes for a period of 3 (three) months in 2 (two) groups of 30 (thirty) patients each of comparable age group, sex difference and duration of symptoms.

All Vertigo patients of central causes were excluded from the study.

Result: Results were quite satisfactory in both groups.

Before advising the specific exercises the following criteria were ensured in a patient:

The patient was suffering from a true vertigo.

The vertigo was of the peripheral–labyrinthine variety. Exclusion of the central causes –by clinical examination was ensured.

BPPV as a cause of vertigo was established in the study.

Multi-disciplinary, multi-pronged approach to management adopted if necessary.

Keywords: Vertigo, Labyrinthine disorders, Rehabilitation exercises.

O42

Effectiveness of balance training in individuals with central postural instability—a prospective study

Arunram

Rationale: Maintaining postural balance involves complex coordination and integration of multiple sensory, motor & biomechanical components.A balance system provides valuable objective assessment of neuromuscular control and somatosensory input important to balance .It can also be used to train subjects with defective coordination, thus is a valuable tool to the rehabilitation physician in the evaluation,training and serial assessment of improvement in persons with postural instability.

Objective: To assess effectiveness of balance training using biodex balance system in subjects with central postural instability.

Study Design: Pre-post Multiple baseline evaluation (prospective study).

Subjects: Patients with central postural instability who are able to stand safely on the platform.

Study period: 1 year (September 2011- August 2012)

Methods: Patients who satisfy the criteria are assessed clinically and in balance system using postural stability test.

Clinical assessment is carried out using Berg Balance scale (score 0-56).It is calculated assessing the performance of 14 functional tasks. Scoring is done using a five-point scale, ranging from0-4.

After initial assessment postural stability training is carried out beginning with static mode, progressing through dynamic mode as the subjects tolerate. They are given 3 sittings per week for 4 weeks and final assessment is carried out using the same parameters.

Analysis: Was done using paired t-test in SPSS statistical software.

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Efficacy of lateral wedging in footwear in medial compartment osteoarthritis knee

Badhal Suman

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Objective: this prospective study was done to study the effect of lateral heel sole wedging (insole) in the patients of OA of knee (medial compartment) and its relation to function, pain and stiffness parameters status on VAS and WOMAC scale and to see the requirement of the number of NSAIDS tablets.

Methods: 54 patients fulfilling the inclusion criteria after Informed consent of patients were enrolledand divided intointervention group A (29) and nonintervention or control group B (25) with random allocation. Paired t-test, WILCOXON SIGN RANK TEST and MAN WITENEY U test were applied at significant p-value of <0.05%.

Results: the reduction of mean difference in pain on VAS and Likerts scale, improvement *in mean difference in function parameters*the mean reduction of pain in standing/ walking, bending and ascending/ descending at WOMAC scale wassignificantly higher in intervention group. Alsothe mean reduction in the need for NSAIDS was

significantly lower in intervention group evident from fourth week onward to fifth and sixth week.

Conclusion: Thelateral wedging in shoes in medial joint osteoarthritis is beneficial and it can be cost-effective conservative treatment modalities in early osteoarthritis patients, particularly in developing countries as it can reduces the requirement of NSAIDS and improve functional level of patients by reducing pain in various activities.

O40

Comparison of immediate postoperative prosthesis versus soft dressing in lower limb amputations

Unmesh

Objective: To compare the efficacy of immediate postoperative prosthesis (IPOP) versus soft dressing in lower limb amputations.

Methods: Forty-four transfemoral/ through knee/ transtibial amputees were included in the study. The patients who met the inclusion criteria were randomized into two groups. First group was given an indigenous design of immediate postoperative prosthesis developed by Dr. S. Y. Kothari while second group was given conventional soft dressing. Girth reduction, time duration in wound healing and stump maturation along with severity of residual pain, phantom pain and sensations, complications, if any, were recorded at baseline, at 6 weeks and at 12 weeks respectively.

Results: Rate of wound healing (95.8%) and stump maturation (96%) was much higher in IPOP group as compared to soft dressing group (80% and 65% respectively). Patients in IPOP group reported decreased complaints of residual pain, phantom pain and sensations. Apart from verrucous hyperplasia, no other complications were seen during study period.

Conclusion: Immediate postoperative prosthesis is an effective method for achieving faster control of oedema, residual pain, phantom pain and sensations, wound healing and stump maturation rate.

O41

A comparative study of outcome of rehabilitation exercises in vertigo due to disorders of the middle ear

Saha Jayanta[1], Mukherjee Dipankar[2], Mukherjee Debasish[3]

[1]M.D. (Cal) Sr Consultant & DNB faculty, Dept of PMR, S.N. Pandit Hospital, Kolkata; [2]M.S., Senior Consultant (ENT), Salt Lake S.D. Hospital; [3]M.S., Senior Consultant (ENT), S.N. Pandit Hospital, Kolkata

Abstract: A large variety of patients with vertigo were referred to the department of Physical Medicine & Rehabilitation at Salt Lake S.D. Hospital & S.N. Pandit Hospital from the departments of ENT & Medicine from March 2008 to March 2012. A majority of these patients were suffering from BPPV (Benign Paroxysmal Positional vertigo)(34%). The present study was conducted to assess the role of Brandt-Daroff's exercises in comparison with Cawthorne–Cooksey exercises in the management of vestibular diseases due to BPPV. BPPV was diagnosed by presence of positional vertigo & Dix-Halpike test and subsequently included in the study. Advancement in diagnostic procedures enabled the diagnosis of the cause of vertigo with some certainity but still clinical features had an important role in the diagnosis.

Differential diagnosis: Vestibular neuronitis & acute viral labyrinthitis were the commonest cause of self-limited inner ear conditions.Meniere's disease, perilymphatic fistula & acoustic neuroma were other peripheral causes of vertigo though their incidence was far less.Impairment of proprioceptive & visual input were causes of peripheral vertigo rarely.

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After proper evaluation Brandt-Daroff's and Cawthorne-Cooksey exercises were advised for vertigo of BPPV causes for a period of 3 (three) months in 2 (two) groups of 30 (thirty) patients each of comparable age group, sex difference and duration of symptoms.

All Vertigo patients of central causes were excluded from the study.

Result: Results were quite satisfactory in both groups.

Before advising the specific exercises the following criteria were ensured in a patient:

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BPPV as a cause of vertigo was established in the study.

Multi-disciplinary, multi-pronged approach to management adopted if necessary.

Keywords: Vertigo, Labyrinthine disorders, Rehabilitation exercises.

O42

Effectiveness of balance training in individuals with central postural instability—a prospective study

Arunram

Rationale: Maintaining postural balance involves complex coordination and integration of multiple sensory, motor & biomechanical components.A balance system provides valuable objective assessment of neuromuscular control and somatosensory input important to balance .It can also be used to train subjects with defective coordination, thus is a valuable tool to the rehabilitation physician in the evaluation,training and serial assessment of improvement in persons with postural instability.

Objective: To assess effectiveness of balance training using biodex balance system in subjects with central postural instability.

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After initial assessment postural stability training is carried out beginning with static mode, progressing through dynamic mode as the subjects tolerate. They are given 3 sittings per week for 4 weeks and final assessment is carried out using the same parameters.

Analysis: Was done using paired t-test in SPSS statistical software.

The results will be analysed using the values of *Mean, Median and Standard Deviation (Quantitative variables)* & using *proportion (Qualitativevariables).* The study is under progression now.

O36

Pregabalin, gabapentin or oxcarbazepine in neuropathic pain?

Sumalatha K B

Neuropathic pain affects more than 2-3% of general population. Pain as described by IASP is "initiated or caused by a primary lesion or dysfunction in the nervous system". Even though there are various groups of drugs available to treat neuropathic pain; and only a few direct comparison studies between these drugs are available which puts us in a dilemma as to which drug to prefer. In this study, we have tried to assess the efficacy and tolerability of the commonly used neuropathic analgesics like Pregabalin, Gabapentin and Oxcarbazepine. The neuropathic pain can be acute onset or chronic nature; we have included neuropathic pain of PIVD or LCS origin to avoid many confounding factors. This is a prospective study done on OPD patients in Dept. of PMR, AIIMS, New Delhi. The primary outcome measure is pain intensity (0-10 on a numerical rating scale) at baseline and at 2 weeks of starting the drug, and secondary outcome measure is maximum tolerated dose of study drug and short form McGill pain questionnaire (SF-MPQ). Though Pregabalin is effective with simple dosing titration, Gabapentin is more cost effective and Oxcarbazepine is found to have similar clinical efficacy with lesser side effects than Pregabalin.

O37

Study of effects of botulinum toxin – A injection on spastic upper limb

Ranjan Amit

Objective: To study the effects of Botulinum toxin-A injection on spastic upper limb.

Method: A prospective follow up study was conducted on consecutive 10 patients with upper limb spasticity attending PMR OPD of VMMC & Safdarjang Hospital. Detailed assessment was done before & after injection Botulinum toxin A, including detailed medical history, assessment of hand functions and grade of spasticity. Follow up was done at 1 month and 3 months. Regular exercise therapy and use of suitable orthosis were continued and encouraged.

Result: There was significant reduction in spasticity of treated muscles and improvement in range of motion in the 12-week period. In addition,7 out of 10 patients reported improved 'comfort' with comparatively 'lighter limb' and increased ease in many activities of daily living including dressing, putting on orthosis, cleaning/drying palm, cutting fingernails, releasing object after grasping. There were no significant side effects of the injection.

Conclusion: Role of Botulinum Toxin A inection is well established for anti-spastic use. Along with decreased spasticity and improved range of motion, other useful effects observed were improved comfort with 'lighter limb' and easier maintenance of hand hygiene.

O38

Clinical and imaging evaluation of efficacy of hyaluronic acid in osteoarthritis knee

Nandi Jaydeep

Objective: To review the clinical as well as disease modifying efficacy of injection hyaluronic acid in osteoarthritis knee.

Method: 30 patients with OA knee (total 55 knees) were given weekly injections of HA for 3 weeks at Safdarjang Hospital, New Delhi. Patients were followed up for 6 months. Symptomatic efficacy parameter was **WOMAC**(Western Ontario and McMaster Universities Index of Osteoarthritis)index assessed on baseline (day 0), day 45, day 90 and day 180. Disease modifying efficacy parameter was MRI based **WORMS** (Whole-organ Magnetic Resonence Imaging Score**)** criteria assessed at baseline (day 0) and at the end of trial (180 days).

Result: Mean **WOMAC** scoreimproved from 97.67±21.37 at baseline to 61.03±24.79 at 6 months (p=0.0001). The mean **WORM Scartilage score** in MFTJ (medial femoro-tibial joint), LFTJ (lateral femoro-tibial joint) and PFJ (patella-femoral joint) remain close to baseline. But, mean **WORM Sbone marrowedema** and **bone cystscores** showed significant improvement in all 3 zones described.

Conclusion: Cartilage integrity score at 6 months remains close to baseline value, which implies a reduced rate of cartilage destruction after injection of HA though there is no regrowth of cartilage as such. Bone marrow edema and bone cyst scores showed significant improvement in all zones, which might be the reason behind the improvement in pain per se in most of the patient on visco-supplementation. Also, x-ray grading appears to be correlating well with the MRI. Cartilage destruction was more among overweight persons and improvement in cartilage score was significant only in grade II OA knee.

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After initial assessment postural stability training is carried out beginning with static mode, progressing through dynamic mode as the subjects tolerate. They are given 3 sittings per week for 4 weeks and final assessment is carried out using the same parameters.

Analysis: Was done using paired t-test in SPSS statistical software.

Results: Postural stability training in balance system has shownstatistically significant improvement in clinical scale & parameters assessed using balance system

Conclusion: Balance system is a useful tool in rehabilitation of individuals with postural instability.

O43

Study to evaluate the effectiveness of the new method of circumtibial transfer of tibialis posterior tendon for the treatment of foot drop

Singh Govind

Objective: To evaluate the effectiveness of the new method of circumtibial transfer of tibialis posterior tendon for the treatment of foot drop.

Methods: The study included ten patients who underwent tendon transfers for correction of foot drop. Seven patients had foot drop due to leprosy and in remaining three patients, it was due to traumatic nerve injuries. In all the patients, tibialis posterior was split into two tails and one tail attached to tibialis anterior and other tail to peroneus brevis. The patients were assessed according to the Stanmore scoring system and were follow-up for a period of six months.

Results: According to Stanmore scoring system, the results were fair in two patients, good in three patients and very good in six patients. The mean foot dorsiflexion was 3.4 degrees (range -2° to 9°). All the patients were satisfied with the final outcome. Apart from adhesion of tendon to suture line in one patient, no other complications were seen during post operative period.

Conclusion: Circumtibial transfer of the tibialis posterior tendon to tibialis anterior and peroneus brevis for the correction of foot drop yields highly successful results in the restoration of active dorsiflexion and also allows for fine adjustment of foot position.

Key words: foot drop, leprosy, tibialis posterior.

O44

Ulnar neuropathy at elbow (U.N.E) in people with haemophilia attending a multi-specialty clinic in a tertiary care centre in South India: an observational study

Chalageri Prashant

Aim: To study prevalence of Ulnar Neuropathy at Elbow (UNE) in people with hemophilia.

Place: Christian Medical College Vellore.

Abstract: According to WHO prevalence of hemophilia globally is 1 in 10000. Elbow is the second most common joint to bleed in patients with hemophilia after the knee joint. Recurrent bleeding around the elbow joint leads to destruction of joint cartilage and reduced range of motion of the elbow joint. The Ulnar nerve's anatomical course behind the elbow joint axis places it at a risk of developing compression neuropathy called Ulnar Neuropathy at Elbow (U.N.E) more commonly known as cubital tunnel syndrome. UNE is the second most common nerve entrapment syndrome after carpal tunnel syndrome. Absence of a data about prevalence of UNE in hemophiliacs prompted us to do the study. 50 subjects with hemophilia were recruited after informed consent. The history of severity of hemophilia, bleed frequency of elbow joints, stage of hemophilic arthropathy etc were taken. Clinical examination and Ulnar nerve conduction study was done and presence or absence of UNE was determined based on criteria by AAEM Quality Assurance Committee. Out of 50 hemophilia patients 24 patients showed UNE. Among 100 elbows and ulnar nerves studied, positive correlation was found between increased bleed frequency, presence of chronic synovitis and UNE.

O45

Efficacy of modified constraint induced movement therapy in hand functions of hemiparetic patients due to stroke

Yadav Raj Kumar[1], Sharma Rajendra[2], Kothari S Y[3], Borah Diganta[4], Laisram Nonica[5]

[1]MD PGT; [2]Director AIIPMR; [3]Special DG & Prof; [4]Assist Prof; [5]HOD Dept of PMR VMMC & Safdarjang Hospital, New Delhi

Objectives: To study the efficacy of modified Constraint Induced Movement Therapy (mCIMT) in the management of upper extremity weakness in hemiparetic patients due to stroke.

Design: Prospective randomised case control study in the PMR department, VMMC and Safdarjang hospital.

Method: Thirty patients received conventional rehabilitation programme (control group) and thirty patients participated in a mCIMT programme in addition to the conventional rehabilitation programme (study group). The mCIMT included three hours therapy sessions emphasizing the affected arm use in general functional tasks, three times a week for four weeks. Their normal arm was also constrained five days per week for five hours.

Outcome Measures: The Fugl-Meyer Assessment (FMA) score for upper extremity and Motor Activity Log (MAL) scale comprising Amount of Use (AOU) score and Quality of Use (QOU) score.

Results: The study group exhibited greater motor recovery on the FMA score at 1 month (13.43) and 3 months (15.9) than the control group (10.7 and 12.23). The mean improvements in AOU scores in the study group at 1 month (6.57) and 3 months (8.2) were better than that of control group (5.47 and 6.63). With respect to QOU scores, mean improvement at 1 month and 3 months in the study group were 6.37 and 7.77 and in the control group were 5.3 and 6.53 respectively. The differences in improvements were statistically significant as shown by their p values.

Conclusion: This study reaffirms the efficacy of mCIMT in improving the motor recovery and functional use of affected hand of stroke patients.

O46

Evaluation of mirror therapy for upper limb rehabilitation in stroke patients

Muzaffar Tufail, Wadhwa R K, Borah Diganta, Kothari S Y, Laisram Nonica

Introduction: Trials have shown modest clinical improvement in disabilities after stroke with the use of different techniques, however most of the treatment protocols for the paretic upper extremity are either expensive or labor intensive, which makes the provision of intensive treatment for manypatients difficult. It has been suggested that mirror therapy is a simple, inexpensive and, mostimportantly

significantly lower in intervention group evident from fourth week onward to fifth and sixth week.

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Analysis: Was done using paired t-test in SPSS statistical software.

Results: Postural stability training in balance system has shownstatistically significant improvement in clinical scale & parameters assessed using balance system

Conclusion: Balance system is a useful tool in rehabilitation of individuals with postural instability.

O43

Study to evaluate the effectiveness of the new method of circumtibial transfer of tibialis posterior tendon for the treatment of foot drop

Singh Govind

Objective: To evaluate the effectiveness of the new method of circumtibial transfer of tibialis posterior tendon for the treatment of foot drop.

Methods: The study included ten patients who underwent tendon transfers for correction of foot drop. Seven patients had foot drop due to leprosy and in remaining three patients, it was due to traumatic nerve injuries. In all the patients, tibialis posterior was split into two tails and one tail attached to tibialis anterior and other tail to peroneus brevis. The patients were assessed according to the Stanmore scoring system and were follow-up for a period of six months.

Results: According to Stanmore scoring system, the results were fair in two patients, good in three patients and very good in six patients. The mean foot dorsiflexion was 3.4 degrees (range -2° to 9°). All the patients were satisfied with the final outcome. Apart from adhesion of tendon to suture line in one patient, no other complications were seen during post operative period.

Conclusion: Circumtibial transfer of the tibialis posterior tendon to tibialis anterior and peroneus brevis for the correction of foot drop yields highly successful results in the restoration of active dorsiflexion and also allows for fine adjustment of foot position.

Key words: foot drop, leprosy, tibialis posterior.

O44

Ulnar neuropathy at elbow (U.N.E) in people with haemophilia attending a multi-specialty clinic in a tertiary care centre in South India: an observational study

Chalageri Prashant

Aim: To study prevalence of Ulnar Neuropathy at Elbow (UNE) in people with hemophilia.

Place: Christian Medical College Vellore.

Abstract: According to WHO prevalence of hemophilia globally is 1 in 10000. Elbow is the second most common joint to bleed in patients with hemophilia after the knee joint. Recurrent bleeding around the elbow joint leads to destruction of joint cartilage and reduced range of motion of the elbow joint. The Ulnar nerve's anatomical course behind the elbow joint axis places it at a risk of developing compression neuropathy called Ulnar Neuropathy at Elbow (U.N.E) more commonly known as cubital tunnel syndrome. UNE is the second most common nerve entrapment syndrome after carpal tunnel syndrome. Absence of a data about prevalence of UNE in hemophiliacs prompted us to do the study. 50 subjects with hemophilia were recruited after informed consent. The history of severity of hemophilia, bleed frequency of elbow joints, stage of hemophilic arthropathy etc were taken. Clinical examination and Ulnar nerve conduction study was done and presence or absence of UNE was determined based on criteria by AAEM Quality Assurance Committee. Out of 50 hemophilia patients 24 patients showed UNE. Among 100 elbows and ulnar nerves studied, positive correlation was found between increased bleed frequency, presence of chronic synovitis and UNE.

O45

Efficacy of modified constraint induced movement therapy in hand functions of hemiparetic patients due to stroke

Yadav Raj Kumar[1], Sharma Rajendra[2], Kothari S Y[3], Borah Diganta[4], Laisram Nonica[5]

[1]MD PGT; [2]Director AIIPMR; [3]Special DG & Prof; [4]Assist Prof; [5]HOD Dept of PMR VMMC & Safdarjang Hospital, New Delhi

Objectives: To study the efficacy of modified Constraint Induced Movement Therapy (mCIMT) in the management of upper extremity weakness in hemiparetic patients due to stroke.

Design: Prospective randomised case control study in the PMR department, VMMC and Safdarjang hospital.

Method: Thirty patients received conventional rehabilitation programme (control group) and thirty patients participated in a mCIMT programme in addition to the conventional rehabilitation programme (study group). The mCIMT included three hours therapy sessions emphasizing the affected arm use in general functional tasks, three times a week for four weeks. Their normal arm was also constrained five days per week for five hours.

Outcome Measures: The Fugl-Meyer Assessment (FMA) score for upper extremity and Motor Activity Log (MAL) scale comprising Amount of Use (AOU) score and Quality of Use (QOU) score.

Results: The study group exhibited greater motor recovery on the FMA score at 1 month (13.43) and 3 months (15.9) than the control group (10.7 and 12.23). The mean improvements in AOU scores in the study group at 1 month (6.57) and 3 months (8.2) were better than that of control group (5.47 and 6.63). With respect to QOU scores, mean improvement at 1 month and 3 months in the study group were 6.37 and 7.77 and in the control group were 5.3 and 6.53 respectively. The differences in improvements were statistically significant as shown by their p values.

Conclusion: This study reaffirms the efficacy of mCIMT in improving the motor recovery and functional use of affected hand of stroke patients.

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Evaluation of mirror therapy for upper limb rehabilitation in stroke patients

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Introduction: Trials have shown modest clinical improvement in disabilities after stroke with the use of different techniques, however most of the treatment protocols for the paretic upper extremity are either expensive or labor intensive, which makes the provision of intensive treatment for manypatients difficult. It has been suggested that mirror therapy is a simple, inexpensive and, mostimportantly

significantly lower in intervention group evident from fourth week onward to fifth and sixth week.

Conclusion: Thelateral wedging in shoes in medial joint osteoarthritis is beneficial and it can be cost-effective conservative treatment modalities in early osteoarthritis patients, particularly in developing countries as it can reduces the requirement of NSAIDS and improve functional level of patients by reducing pain in various activities.

O40

Comparison of immediate postoperative prosthesis versus soft dressing in lower limb amputations

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Objective: To compare the efficacy of immediate postoperative prosthesis (IPOP) versus soft dressing in lower limb amputations.

Methods: Forty-four transfemoral/ through knee/ transtibial amputees were included in the study. The patients who met the inclusion criteria were randomized into two groups. First group was given an indigenous design of immediate postoperative prosthesis developed by Dr. S. Y. Kothari while second group was given conventional soft dressing. Girth reduction, time duration in wound healing and stump maturation along with severity of residual pain, phantom pain and sensations, complications, if any, were recorded at baseline, at 6 weeks and at 12 weeks respectively.

Results: Rate of wound healing (95.8%) and stump maturation (96%) was much higher in IPOP group as compared to soft dressing group (80% and 65% respectively). Patients in IPOP group reported decreased complaints of residual pain, phantom pain and sensations. Apart from verrucous hyperplasia, no other complications were seen during study period.

Conclusion: Immediate postoperative prosthesis is an effective method for achieving faster control of oedema, residual pain, phantom pain and sensations, wound healing and stump maturation rate.

O41

A comparative study of outcome of rehabilitation exercises in vertigo due to disorders of the middle ear

Saha Jayanta[1], Mukherjee Dipankar[2], Mukherjee Debasish[3]

[1]M.D. (Cal) Sr Consultant & DNB faculty, Dept of PMR, S.N. Pandit Hospital, Kolkata; [2]M.S., Senior Consultant (ENT), Salt Lake S.D. Hospital; [3]M.S., Senior Consultant (ENT), S.N. Pandit Hospital, Kolkata

Abstract: A large variety of patients with vertigo were referred to the department of Physical Medicine & Rehabilitation at Salt Lake S.D. Hospital & S.N. Pandit Hospital from the departments of ENT & Medicine from March 2008 to March 2012. A majority of these patients were suffering from BPPV (Benign Paroxysmal Positional vertigo)(34%). The present study was conducted to assess the role of Brandt-Daroff's exercises in comparison with Cawthorne–Cooksey exercises in the management of vestibular diseases due to BPPV. BPPV was diagnosed by presence of positional vertigo & Dix-Halpike test and subsequently included in the study. Advancement in diagnostic procedures enabled the diagnosis of the cause of vertigo with some certainity but still clinical features had an important role in the diagnosis.

Differential diagnosis: Vestibular neuronitis & acute viral labyrinthitis were the commonest cause of self-limited inner ear conditions.Meniere's disease, perilymphatic fistula & acoustic neuroma were other peripheral causes of vertigo though their incidence was far less.Impairment of proprioceptive & visual input were causes of peripheral vertigo rarely.

In addition to the peripheral causes there were the central causes which came in the differential diagnoses of vertigo. Common causes include stroke & TIA.

After proper evaluation Brandt-Daroff's and Cawthorne-Cooksey exercises were advised for vertigo of BPPV causes for a period of 3 (three) months in 2 (two) groups of 30 (thirty) patients each of comparable age group, sex difference and duration of symptoms.

All Vertigo patients of central causes were excluded from the study.

Result: Results were quite satisfactory in both groups.

Before advising the specific exercises the following criteria were ensured in a patient:

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BPPV as a cause of vertigo was established in the study.

Multi-disciplinary, multi-pronged approach to management adopted if necessary.

Keywords: Vertigo, Labyrinthine disorders, Rehabilitation exercises.

O42

Effectiveness of balance training in individuals with central postural instability—a prospective study

Arunram

Rationale: Maintaining postural balance involves complex coordination and integration of multiple sensory, motor & biomechanical components.A balance system provides valuable objective assessment of neuromuscular control and somatosensory input important to balance .It can also be used to train subjects with defective coordination, thus is a valuable tool to the rehabilitation physician in the evaluation,training and serial assessment of improvement in persons with postural instability.

Objective: To assess effectiveness of balance training using biodex balance system in subjects with central postural instability.

Study Design: Pre-post Multiple baseline evaluation (prospective study).

Subjects: Patients with central postural instability who are able to stand safely on the platform.

Study period: 1 year (September 2011- August 2012)

Methods: Patients who satisfy the criteria are assessed clinically and in balance system using postural stability test.

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patient-directed treatment that may improve upper-extremity function.

Methodology: A prospective randomized case control study was done on 60 patients of both the sexes in the age group of 19 to 82 years having stroke for the first time. This study was conducted in Department of Physical Medicine and Rehabilitation, of a tertiary care hospital. All the patientswho fulfilled the criteria were enrolled for study; patients were randomly allotted in study orcontrol group. Study group was given mirror therapy in addition to the conventional strokerehabilitation program. Patients were assessed in terms of motor recovery (Brunnstrom stages), spasticity (Modified Ashworth Scale), and the self-care items of the Barthel index. These indiceswere measured at 0 months (pretreatment), 1 month (posttreatment), and 6 months (follow-up).

Results: There was a statistically significant difference in spasticity improvement between the studyand control group, however no significant difference was seen in motor recovery and self careitems between the groups. The patients had significant improvements within the groups after thetherapy for one month.

Conclusion: Mirror therapy can be useful intervention supplement in rehabilitation of patients, it provides a simple and cost effective therapy for recovery of hand function.

O47

Study of effectiveness of shoulder elbow wrist hand orthosis in the management of gleno-humeral subluxation in post-stroke hemiplegic patients

Singh Y Nandabir

Objective: To study the effectiveness of Shoulder Elbow Wrist Hand Orthosis in the management of gleno-humeral subluxation in post-stroke hemiplegic patients.

Method:
Design: Randomized Control Trial
Setting: Department of PMR, RIMS, Imphal.
Participants: Post stroke hemiplegic (N=120) having GHS as confirmed by X-ray.
Duration: One and half years (August 2010 to January 2012).
Intervention: Control group (N=60) received Routine Rehabilitation programme for hemiplegic practice in dept. of PMR, RIMS while the experiment group (N=60) received Shoulder Elbow Wrist Hand Orthosis in addition to Rehabilitation programme.
Outcomes: Grade of GHS using X-ray

Results: Experiment group showed reduction in the GHS which is statistically significant when compare to control group (P =0.001).

Conclusion: Used of Upper limb orthosis in addition to routine rehabilitation programme can effectively reduce GHS in post stroke hemiplegic patients.

Keywords: Gleno-humeral subluxation (GHS), Shoulder elbow wrist hand orthosis (SEWHO), Post-stroke hemiplegic patients

O48

Study of somatosensory evoked potentials in traumatic brain injury

Patil Swapna

Objectives: To study changes in Somatosensory evoked potentials at different time intervals following Traumatic brain injury and their role in prognosis.

Methods: 21 patients with TBI underwent SSEPs (Median and Tibial) studies and assessment of outcome measures (Mini Mental Status Examination, Modified Barthel Index, Rancho Los Amigos, Disability Rating and Glasgow Outcome scales) initially and at 3 months after the TBI. SSEPs were graded as I – normal, II – absent/ prolonged unilaterally, prolonged bilaterally, absent on one side and prolonged on the other side, and III - absent bilaterally. Descriptive statistics for continuous data and univariate analysis for co-relation between SSEPs and outcome scales was done.

Results: The mean age at presentation and duration of TBI were 33.4 years and 19.33 days respectively. The initial mean GCS, RLA and DRS scores were 7.90 (SD-0.77), 3.1 (SD-0.63) and 21.76 (SD-1.95) respectively. Median SSEPs improved in 27% and worsened in 11% patients. Tibial SSEPs improved in 22% and worsened in 25% patients. Patients with normal/ impaired initial Median SSEPs significantly improved in all the outcome measures ($p<0.05$) at 3 months, compared to those with absent potentials. Median SSEPs at 3 months co-related with RLA, MBI and DRS at 3 months. Initial Tibial SSEPs co-related with MMSE and 3 month Tibial SSEPs co-related with MBI scores. Changes in SSEPs did not co-relate with outcome.

Conclusion: In addition to clinical examination and neuroimaging, SSEPs can be useful for prognostication after TBI.

O49

Rehabilitation potentials following RCS in thumb deformity in leprosy cured patients

Pan Soumya Santa

Purpose: All PMR Institutes and the PMR Departments have been designated as Tertiary Care centre, by the Ministryof Health, for achieving goals on Disability prevention and Medical Rehabilitation in leprosy cured patients suffering with hand deformities. Hand problems are of major concern. Leprosy neuritis affects nerves where they are close to the skin and pass through a narrow fibro-osseous canal. In the hand this involves mainly the ulnar and median nerves, leading to claw hand and thumb deformity.

In the hand, median nerve supplies the intrinsic muscles of the thenar eminens including Opponens pollicis which is responsible for opposition of thumb. When median nerve is involved in leprosy, it results in failure of opposition of thumb, leading to thumb deformity. The purpose of RCS is to achieve *opposition of thumb* and thereby correcting the thumb deformity. The tendon transfer procedure appears to be useful in such situation.

Materials and Methods: A total of 57 leprosy cured persons presenting with thumb deformity underwent the RCS procedure. The tendon of Flexor digitorum superficialis of ring finger was re-routed over the palm and was transferred then to the thumb followed by vigorous tendon re-education upto next four weeks.

Results: The hand functions were evaluated at the end of three and six months. Most of them were able to achieve *proper opposition of thumb* and reasonably good hand function.

Conclusion: *S*uch Reconstructive procedures must be taken up by the *Physiatrists in* larger numbers to achieve proper & complete Rehabilitation of thumb deformity.

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Singh Govind

Objective: To evaluate the effectiveness of the new method of circumtibial transfer of tibialis posterior tendon for the treatment of foot drop.

Methods: The study included ten patients who underwent tendon transfers for correction of foot drop. Seven patients had foot drop due to leprosy and in remaining three patients, it was due to traumatic nerve injuries. In all the patients, tibialis posterior was split into two tails and one tail attached to tibialis anterior and other tail to peroneus brevis. The patients were assessed according to the Stanmore scoring system and were follow-up for a period of six months.

Results: According to Stanmore scoring system, the results were fair in two patients, good in three patients and very good in six patients. The mean foot dorsiflexion was 3.4 degrees (range -2° to 9°). All the patients were satisfied with the final outcome. Apart from adhesion of tendon to suture line in one patient, no other complications were seen during post operative period.

Conclusion: Circumtibial transfer of the tibialis posterior tendon to tibialis anterior and peroneus brevis for the correction of foot drop yields highly successful results in the restoration of active dorsiflexion and also allows for fine adjustment of foot position.

Key words: foot drop, leprosy, tibialis posterior.

O44

Ulnar neuropathy at elbow (U.N.E) in people with haemophilia attending a multi-specialty clinic in a tertiary care centre in South India: an observational study

Chalageri Prashant

Aim: To study prevalence of Ulnar Neuropathy at Elbow (UNE) in people with hemophilia.

Place: Christian Medical College Vellore.

Abstract: According to WHO prevalence of hemophilia globally is 1 in 10000. Elbow is the second most common joint to bleed in patients with hemophilia after the knee joint. Recurrent bleeding around the elbow joint leads to destruction of joint cartilage and reduced range of motion of the elbow joint. The Ulnar nerve's anatomical course behind the elbow joint axis places it at a risk of developing compression neuropathy called Ulnar Neuropathy at Elbow (U.N.E) more commonly known as cubital tunnel syndrome. UNE is the second most common nerve entrapment syndrome after carpal tunnel syndrome. Absence of a data about prevalence of UNE in hemophiliacs prompted us to do the study. 50 subjects with hemophilia were recruited after informed consent. The history of severity of hemophilia, bleed frequency of elbow joints, stage of hemophilic arthropathy etc were taken. Clinical examination and Ulnar nerve conduction study was done and presence or absence of UNE was determined based on criteria by AAEM Quality Assurance Committee. Out of 50 hemophilia patients 24 patients showed UNE. Among 100 elbows and ulnar nerves studied, positive correlation was found between increased bleed frequency, presence of chronic synovitis and UNE.

O45

Efficacy of modified constraint induced movement therapy in hand functions of hemiparetic patients due to stroke

Yadav Raj Kumar[1], Sharma Rajendra[2], Kothari S Y[3], Borah Diganta[4], Laisram Nonica[5]

[1]MD PGT; [2]Director AIIPMR; [3]Special DG & Prof; [4]Assist Prof; [5]HOD Dept of PMR VMMC & Safdarjang Hospital, New Delhi

Objectives: To study the efficacy of modified Constraint Induced Movement Therapy (mCIMT) in the management of upper extremity weakness in hemiparetic patients due to stroke.

Design: Prospective randomised case control study in the PMR department, VMMC and Safdarjang hospital.

Method: Thirty patients received conventional rehabilitation programme (control group) and thirty patients participated in a mCIMT programme in addition to the conventional rehabilitation programme (study group). The mCIMT included three hours therapy sessions emphasizing the affected arm use in general functional tasks, three times a week for four weeks. Their normal arm was also constrained five days per week for five hours.

Outcome Measures: The Fugl-Meyer Assessment (FMA) score for upper extremity and Motor Activity Log (MAL) scale comprising Amount of Use (AOU) score and Quality of Use (QOU) score.

Results: The study group exhibited greater motor recovery on the FMA score at 1 month (13.43) and 3 months (15.9) than the control group (10.7 and 12.23). The mean improvements in AOU scores in the study group at 1 month (6.57) and 3 months (8.2) were better than that of control group (5.47 and 6.63). With respect to QOU scores, mean improvement at 1 month and 3 months in the study group were 6.37 and 7.77 and in the control group were 5.3 and 6.53 respectively. The differences in improvements were statistically significant as shown by their p values.

Conclusion: This study reaffirms the efficacy of mCIMT in improving the motor recovery and functional use of affected hand of stroke patients.

O46

Evaluation of mirror therapy for upper limb rehabilitation in stroke patients

Muzaffar Tufail, Wadhwa R K, Borah Diganta, Kothari S Y, Laisram Nonica

Introduction: Trials have shown modest clinical improvement in disabilities after stroke with the use of different techniques, however most of the treatment protocols for the paretic upper extremity are either expensive or labor intensive, which makes the provision of intensive treatment for manypatients difficult. It has been suggested that mirror therapy is a simple, inexpensive and, mostimportantly

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Chalageri Prashant

Aim: To study prevalence of Ulnar Neuropathy at Elbow (UNE) in people with hemophilia.

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Method: Thirty patients received conventional rehabilitation programme (control group) and thirty patients participated in a mCIMT programme in addition to the conventional rehabilitation programme (study group). The mCIMT included three hours therapy sessions emphasizing the affected arm use in general functional tasks, three times a week for four weeks. Their normal arm was also constrained five days per week for five hours.

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patient-directed treatment that may improve upper-extremity function.

Methodology: A prospective randomized case control study was done on 60 patients of both the sexes in the age group of 19 to 82 years having stroke for the first time. This study was conducted in Department of Physical Medicine and Rehabilitation, of a tertiary care hospital. All the patientswho fulfilled the criteria were enrolled for study; patients were randomly allotted in study orcontrol group. Study group was given mirror therapy in addition to the conventional strokerehabilitation program. Patients were assessed in terms of motor recovery (Brunnstrom stages), spasticity (Modified Ashworth Scale), and the self-care items of the Barthel index. These indiceswere measured at 0 months (pretreatment), 1 month (posttreatment), and 6 months (follow-up).

Results: There was a statistically significant difference in spasticity improvement between the studyand control group, however no significant difference was seen in motor recovery and self careitems between the groups. The patients had significant improvements within the groups after thetherapy for one month.

Conclusion: Mirror therapy can be useful intervention supplement in rehabilitation of patients, it provides a simple and cost effective therapy for recovery of hand function.

O47

Study of effectiveness of shoulder elbow wrist hand orthosis in the management of gleno-humeral subluxation in post-stroke hemiplegic patients

Singh Y Nandabir

Objective: To study the effectiveness of Shoulder Elbow Wrist Hand Orthosis in the management of gleno-humeral subluxation in post-stroke hemiplegic patients.

Method:
Design: Randomized Control Trial
Setting: Department of PMR, RIMS, Imphal.
Participants: Post stroke hemiplegic (N=120) having GHS as confirmed by X-ray.
Duration: One and half years (August 2010 to January 2012).
Intervention: Control group (N=60) received Routine Rehabilitation programme for hemiplegic practice in dept. of PMR, RIMS while the experiment group (N=60) received Shoulder Elbow Wrist Hand Orthosis in addition to Rehabilitation programme.
Outcomes: Grade of GHS using X-ray

Results: Experiment group showed reduction in the GHS which is statistically significant when compare to control group (P =0.001).

Conclusion: Used of Upper limb orthosis in addition to routine rehabilitation programme can effectively reduce GHS in post stroke hemiplegic patients.

Keywords: Gleno-humeral subluxation (GHS), Shoulder elbow wrist hand orthosis (SEWHO), Post-stroke hemiplegic patients

O48

Study of somatosensory evoked potentials in traumatic brain injury

Patil Swapna

Objectives: To study changes in Somatosensory evoked potentials at different time intervals following Traumatic brain injury and their role in prognosis.

Methods: 21 patients with TBI underwent SSEPs (Median and Tibial) studies and assessment of outcome measures (Mini Mental Status Examination, Modified Barthel Index, Rancho Los Amigos, Disability Rating and Glasgow Outcome scales) initially and at 3 months after the TBI. SSEPs were graded as I – normal, II – absent/ prolonged unilaterally, prolonged bilaterally, absent on one side and prolonged on the other side, and III - absent bilaterally. Descriptive statistics for continuous data and univariate analysis for co-relation between SSEPs and outcome scales was done.

Results: The mean age at presentation and duration of TBI were 33.4 years and 19.33 days respectively. The initial mean GCS, RLA and DRS scores were 7.90 (SD-0.77), 3.1 (SD-0.63) and 21.76 (SD-1.95) respectively. Median SSEPs improved in 27% and worsened in 11% patients. Tibial SSEPs improved in 22% and worsened in 25% patients. Patients with normal/ impaired initial Median SSEPs significantly improved in all the outcome measures ($p<0.05$) at 3 months, compared to those with absent potentials. Median SSEPs at 3 months co-related with RLA, MBI and DRS at 3 months. Initial Tibial SSEPs co-related with MMSE and 3 month Tibial SSEPs co-related with MBI scores. Changes in SSEPs did not co-relate with outcome.

Conclusion: In addition to clinical examination and neuroimaging, SSEPs can be useful for prognostication after TBI.

O49

Rehabilitation potentials following RCS in thumb deformity in leprosy cured patients

Pan Soumya Santa

Purpose: All PMR Institutes and the PMR Departments have been designated as Tertiary Care centre, by the Ministryof Health, for achieving goals on Disability prevention and Medical Rehabilitation in leprosy cured patients suffering with hand deformities. Hand problems are of major concern. Leprosy neuritis affects nerves where they are close to the skin and pass through a narrow fibro-osseous canal. In the hand this involves mainly the ulnar and median nerves, leading to claw hand and thumb deformity.

In the hand, median nerve supplies the intrinsic muscles of the thenar eminens including Opponens pollicis which is responsible for opposition of thumb. When median nerve is involved in leprosy, it results in failure of opposition of thumb, leading to thumb deformity. The purpose of RCS is to achieve *opposition of thumb* and thereby correcting the thumb deformity. The tendon transfer procedure appears to be useful in such situation.

Materials and Methods: A total of 57 leprosy cured persons presenting with thumb deformity underwent the RCS procedure. The tendon of Flexor digitorum superficialis of ring finger was re-routed over the palm and was transferred then to the thumb followed by vigorous tendon re-education upto next four weeks.

Results: The hand functions were evaluated at the end of three and six months. Most of them were able to achieve *proper opposition of thumb* and reasonably good hand function.

Conclusion: *S*uch Reconstructive procedures must be taken up by the *Physiatrists in* larger numbers to achieve proper & complete Rehabilitation of thumb deformity.

O50

Exercise in diabetes. Why, what, how and when…?

Chandran Roy R

Assistant Professor, PMR, Govt. Medical College, Calicut, Kerala

Introduction: Exercise is a key player along with dietary modification in DM management. Why should a physiatrist be equipped for managing DM? As we all know most of the complications of DM like diabetic arthropathies, neuropathies, stroke and other CVDs, amputees will reach the rehabilitation department. For treating the complications of a disease; we should definitely treat and control the disease along with or prior to managing the complications. So 'Physiatry is actually beyond rehabilitation'. As experts in exercise therapy; we actually have an upper hand in its prescription and implementation. Obesity and DM have reached pandemic proportions. So as a part of the modern medicine family, the Physiatrists too have the responsibility to control and curtail this pandemic.

Topic Proper: Studies have clearly shown that when a person is on diet control alone without exercise,they tend to put on as much or more weight than he took off initially. This will increase the insulin resistance and ultimately worsens the glycaemic status. Exercise also helps to reduce the chances of developing diabetes in prediabetic persons. The benefits of exercise in patients with diabetes and those with metabolic syndrome include favourable lipid levels and BP, prevention of CVD and cancers,improved tolerance for ADL, maintain BMD etc regardless of the weight loss occurred. The American Diabetic Association in 2012 guidelines recommends that diabetes patients should perform at least 150 min/week of moderate intensity aerobic physical activity and in the absence of contraindications; they should perform resistance training 3 times/week. The exercise prescription should be tailor made for each patient considering the physical conditions, cardiac status etc.

Keywords: Physiatrists' role in Diabetes management, Aerobic and anaerobic exercise, Exercise prescription

O51

Prevalence of musculoskeletal complications in diabetes mellitus—Calicut experience

Antony Anit

Background: India has a total number of 61.3 million diabetics as per the estimation for 2011 by International Diabetes Federation and is considered to be the diabetic capital of the world. Diabetes mellitus is associated with a variety of musculoskeletal complications and their prevalence in these patients has increased in the recent years affecting significantly their quality of life. A wide range of musculoskeletal syndromes have been described in association with diabetes, namely diabetic cheiro-arthropathy, adhesive capsulitis of shoulder, carpal tunnel syndrome, Dupuytren's contracture, hyperostosis, osteoarthritis, hyperuricaemia, etc.

AIM: To study the prevalence of musculoskeletal complications in diabetic patients attending the OPD & Lifestyle Diseases Rehabilitation Clinic at Medical College, Calicut from 1/9/2011 to 31/8/2012

Study Design: Cross sectional study.

Methods: Diabetes was diagnosed by ADA guidelines; muculoskeletal complications were diagnosed by unbiased clinical observations on the basis of standardised case definitions or criteria.

Results: Osteoarthritis of knee was the most common musculoskeletal disorder followed by adhesive capsulitis of shoulder, complex regional pain syndrome, carpal tunnel syndrome & Dupuytren's contracture.

Conclusion: Thorough musculoskeletal examination should be included as an integral part in the management of diabetes mellitus.

Keywords: diabetes mellitus, musculoskeletal complications, prevalence.

O52

Management of chronic low back pain–a prospective analytic study

Sahoo P K, Sahoo J, Das S P, Mohanty R N

Introduction: 10% of the total patients attending the outpatient department are the chronic low back pain patients. LBP has been cited as the second most frequent reason to visit a physician for a chronic condition, the fifth most common cause for hospitalization, and the third most frequent reason for a surgical procedure. It is a major burden over the health care system. Over all it decreases the quality of life.Treatment for chronic low back pain falls into three broad categories: monotherapies, mulitidisciplinary therapy, and reductionism.Most monotherapies either do not work or have limited efficacy. The reductionist approach should be implemented when a specific diagnosis is needed.

The objective of the study is to compare the result of chronic low back pain management with medication, medication with physiotherapy & by surgical method.

Material & Methods: Total 88 patients given consent for participating for the study are included & followed for average of 10 months. The inclusion criterion was back pain that persisted for more than 3 months irrespective of treatment. Cases with history of major trauma, listhesis, tumor, infection, children or adolescents with low back pain, pregnant women,patients with low back pain from sources outside the back (nonspinal low back pain) were excluded from the study. With the consent of thepatient cases were arbitrarily selected for different three groups. First group were advised with life style modifications with home exercise program. Second group were advised medication with instructions of first group. Third group of patients those who were not willing for further medical management were advised for surgery. Periodic assessment was done using VAS score, McGill pain score&Oswestry disability index.

Result: Patients in all the three groups improved significantly. Physiotherapy with Medicine Group did better than Physiotherapy only.All patients in surgery group improved except one who had radiculopathy referring to multiple levels.

Conclusion: Most of the patients of Back ache do not need surgery.Option of Physiotherapy and conservative care should be given to all patients of Chronic Low Back Ache. Multidisciplinary therapy based on intensive exercises improves physical function and has modest effects on pain. Counseling played a great role in managing psychosomatic pain.

Keywords: low back pain, therapy, VAS.

Oral Abstracts

O1

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Laisram Nonica, Bhatnagar Shikha, Muzaffar Tufail

Dept. of PMR, VMMC & Safdarjang Hospital, New Delhi

Objectives: To study the changing trend in clinical profile & etiological factors in Cerebral Palsy .

Methods: The clinical profile & etiological factors were studied retrospectively in Cerebral palsy (CP) patients attending PMR OPD of VMMC & Safdarjang Hospital between 1981 to 1989 (Group A: 544 patients) and 2008 to 2012 (Group B: 410 patients). Patients clinical profile & etiological factors were compared by Student's T Test for significance using SPSS software version 17.

Results: There was no significant difference in sex ratio between two groups. Among the different types of CP, Spastic CP remained most common in both the groups. The pattern also remained same for Hypotonic and Dyskinetic type of CP. The Mixed type showed an increase in percentage (Group A: 0.18 % vs. Group B: 3.7 %). The difference was statistically significant.

Among the Spastic type, Quadriplegia (Group A: 34.9% vs Group B:26.6%) and Hemiplegia (Group A: 28.7% vs Group B: 20.5%) were more in Group A, and Diplegia more in Group B (Group A: 21.9% vs Group B:36 %). The difference was statistically significant.

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O2

Prevalence of peripheral neuropathies in upper limbs of chronic spinal cord injured persons

Chatterjee Ahana, Bhide Rohit, Chandy Bobeena Rachel

Department of PMR, Christian Medical College, Vellore.

Objective: This study was done to determine the prevalence of upper limb compressive neuropathies at wrist in chronic spinal cord injured (SCI) patients by electrodiagnosis and self-assessment questionnaire.

Methods: 54 chronic SCI patients filled up Boston Questionnaire to assess symptoms related to carpal tunnel syndrome and other compressive neuropathies. All patients underwent electro-neuromyography (ENMG) to evaluate presence of neuropathy. ENMG involved assessment of Median, Ulnar and Radial nerves sensory and motor conductions. Herrmann and Logigian severity scale was used for CTS grading.

Results: 50 males and 4 females participated in the study. Mean duration of paraplegia was 10.3 (range 1 - 37) years. Analysis of Boston questionnaire yielded mean symptom-severity score of 1.6 and mean functional-status score was 1.38. Electrophysiologically, 45 subjects had one or more compressive neuropathy involving median, ulnar or radial nerve. 14 had ulnar neuropathy, 43 had median neuropathy and 10 had findings suggestive of radial neuropathy. 7 subjects had more than one nerve involvement. The incidence of peripheral neuropathy had a direct correlation with duration of spinal cord injury.

Conclusion: Comparison between subjective (Boston questionnaire) and objective (ENMG) data showed high prevalence of compressive neuropathies in upper limbs of chronic SCI persons. The objective findings showed greater sensitivity in diagnosing neuropathies compared to subjective symptoms. There is a direct association between prevalence of compressive neuropathies and time since injury.

Keywords: Spinal cord injury; Compressive nerve entrapment; Upper extremity.

O3

Burden and stress in caregivers of children with cerebral palsy

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Methodology: The study sample consisted of 65 primary caregivers of children with Cerebral Palsy aged 6 months to 10 years. Two scales were used, DAS (Depression, Anxiety and Stress) scale and Family burden scale. Data were collected by questionnaires. Descriptive statistics and multiple regressions were used for data analysis.

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Conclusion: From this study it can be concluded that caregivers of children with Cerebral Palsy experience burden and stress, which are associated with many factors. So it is recommended that healthcare professionals should provide interventions to increase the caregiver's skill in providing care and coping with stress. They should also enhance support networks and encourage and promote the health and wellbeing of the caregivers, so that caregivers can effectively and efficiently care for their children with Cerebral Palsy.

O4

Risk factors for undernutrition in children with cerebral palsy–a case control study

Lekha C, Rajagopal Sooraj, Krishnaprasad

A case control study was conducted in Department of PMR to assess the prevalence of undernutrition in cerebral palsy and its risk factors. 50 children were enrolled in the study between age groups 2 and 12

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years of age. Children with normal nutrition were taken as controls and those with undernutrition were taken as cases. The study found that undernutrition was a severe health problem in cerebral palsy children and the risk factors were also found out. The main risk factors were oromotor dysfunction, presence of medical problems, GMFCS levels.

O5

Efficacy of spinal brace in preventing progression of adolescent idiopathic scoliosis

Sreekala V K

Professor & HOD, Department of PM & R, Medical College, Trivandrum

Eighteen adolescent girls in the age group of 10 to 16 were studied in June 2010 to May 2012. Of these two had to undergo surgery as the curve was more than 50 degree Cobb's angle at the time of first presentation (11%). Out of 16, 12 have remained the same improved (75%). All 16 were treated with very low temperature Thermoplastic Spinal brace. One interesting finding is that irrespective of the duration of wearing the brace none worsened / progressed during the period of study.

Keywords: Adolescent Idiopathic Scoliosis, Spinal Brace.

O6

Rehabilitation of burn injury cases

Dash J B

Objectives of Investigation: Burn injuries comes up with challenges of being most sensitive, riskful area of treatment, unwarranted chances of recovery, demanding experienced handling and optimal care. My investigation was atfirst geared up within my own domain in PM&R dept. in Kalinga Hospital(Odisha) wherein I selected 30 suitable cases that answered almost all queries pertaining to this area. Hereby I present an overlook about the relevant findings of my work.

Methods Used: Prior to the conventional methods of treatment a very essential step is creating awareness for physiotherapy in the patient to help prevent *contracture and deformity* followed by *the Planning of Physiotherapy* such as

TBSA assessment
Progressive Therapeutic Exercises Program
Wax bath in hand injury cases.
Electrophysiotherapy
Ambulation etc (detailed in the presentation)
and most importantly social integration to family & society.

Result: Post the initial treatment results of recovery are classified under excellent, good, average and poor. Regular follow-ups and treatments are lined up from time to time even after the patient is discharged till the journey from "poor" to atleast "good" ensures our job is well done.

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Study of histopathological features in various stages of pressure ulcer and to know whether this knowledge will help in its management

Sreejith R

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Materials and Methods:

Design: Descriptive study

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Study tool: Spinal cord injury patients with pressure ulcer

Period of study: 1st November 2011 to 31st May 2012

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Procedure: Subjects were taken into study with written informed consent. A bit of tissue is biopsied from the edge of the ulcer along with those taken for culture and sensitivity and send separately to department of pathology for histopathological examination.

Results: The salient histopathological features of stage 2, 3 & 4 pressure ulcers is studied.

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Keywords: Pressure ulcers, Histopathology

O8

Quality of life and functional status of inmates of old age homes

Zachariah T[1], Sreekala V K[2], Surendran A[3]

[1]Junior Resident, [2]Prof and HOD, [3]Addl Prof
Dept of PMR, Medical College Thiruvananthapuram

Objectives: To study the Quality of Life (QOL) of inmates of oldage homes in the urban part of Thiruvananthapuram district using SF36 QOL Questionnaire.

To assess the functional status of these inmates of Oldage homes using Barthel Index.

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Malignancy

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Laisram Nonica, Bhatnagar Shikha, Muzaffar Tufail

Dept. of PMR, VMMC & Safdarjang Hospital, New Delhi

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Keywords: Adolescent Idiopathic Scoliosis, Spinal Brace.

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Dash J B

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Methods Used: Prior to the conventional methods of treatment a very essential step is creating awareness for physiotherapy in the patient to help prevent *contracture and deformity* followed by *the Planning of Physiotherapy* such as

TBSA assessment
Progressive Therapeutic Exercises Program
Wax bath in hand injury cases.
Electrophysiotherapy
Ambulation etc (detailed in the presentation)
and most importantly social integration to family & society.

Result: Post the initial treatment results of recovery are classified under excellent, good, average and poor. Regular follow-ups and treatments are lined up from time to time even after the patient is discharged till the journey from "poor" to atleast "good" ensures our job is well done.

Conclusion: Medication saves life but rehabilitation helps live it again. However this is practised by few corporate hospitals only. Moreover burn injury cases being acute are referred to PM&R dept. after the patient's vitals are stable . My cases under investigation have been probed over a period from 8.4.2005-8.8.2012. Still a thousand other cases await to be put under scanner. With some serious interest and skillful indulgences I hope our purpose sees the ultimate sunshine.

O7

Study of histopathological features in various stages of pressure ulcer and to know whether this knowledge will help in its management

Sreejith R

Objective: To study the histopathological features in various stages of pressure ulcer and to know whether this knowledge will help in its management.

Materials and Methods:

Design: Descriptive study

Settings: Inpatients in Dept .of Physical Medicine & Rehabilitation, Calicut Medical College

Study tool: Spinal cord injury patients with pressure ulcer

Period of study: 1st November 2011 to 31st May 2012

Inclusion criteria: Patients with pressure ulcer of stages 2,3 &4 who required tissue biopsy for culture and sensitivity.

Exclusion criteria: Patients with cognitive impairment, patients without significant caregiver.

Procedure: Subjects were taken into study with written informed consent. A bit of tissue is biopsied from the edge of the ulcer along with those taken for culture and sensitivity and send separately to department of pathology for histopathological examination.

Results: The salient histopathological features of stage 2, 3 & 4 pressure ulcers is studied.

Conclusion: Discuss if the knowledge of microscopic details help in improving management of pressure ulcers.

Keywords: Pressure ulcers, Histopathology

O8

Quality of life and functional status of inmates of old age homes

Zachariah T[1], Sreekala V K[2], Surendran A[3]

[1]Junior Resident, [2]Prof and HOD, [3]Addl Prof
Dept of PMR, Medical College Thiruvananthapuram

Objectives: To study the Quality of Life (QOL) of inmates of oldage homes in the urban part of Thiruvananthapuram district using SF36 QOL Questionnaire.

To assess the functional status of these inmates of Oldage homes using Barthel Index.

Design: Descriptive Cross-sectional Study

Setting: Oldage homes in the urban part of Thiruvananthapuram District.

Population or Participants: People selected by following inclusion and exclusion criteria

Inclusion Criteria: Both males and females above age of 60 years who gave a written consent for the study.

Exclusion Criteria: Bed ridden patients
Spinal Cord Injury survivors
Stroke patients
Traumatic brain injury survivors
Amputees
Patients with psychiatric illness or on medication
Patients with dementia, parkinsonism, etc
Malignancy

Period of Study: 1 year.

Method of Sampling: Conveniently selected oldage homes in urban area of Thiruvananthapuram district.

Methodology: Study to be conducted using self developed Proforma and Questionnaires by Interview method.

Outcome Measures: SF36 QOL Questionnaire: It is a generic measure which consists of 36 questions spanning 8 domains. It has been validated for geriatric population.

Barthel Index: It is to assess the level of functional independence/ dependence for ten Activities of Daily Living (ADLs) primarily related to personal care and mobility. It tests ten ADLs including the ability to independently feed oneself, bathe, groom oneself, control of bowels and bladder, toilet use, transfers, mobility on level surfaces and stairs. It has a point value for each section. A higher score means the patient is more independent.

O9

Study to assess the role of peripheral exercise in rehabilitation of C.O.P.D patients

Chirania Anirudh[1], Biswas M M[2], Saha Jayanta[3], Sen M[4], Pramanik R[5]

[1]PGT DNB (PMR), [2]MD, DNB Senior consultant (PMR), [3]MD Senior consultant (PMR), [4]DNB Junior consultant (PMR): S.N.P. Hospital Kolkata;

[5]MD, MRCP Assistant Professor (PMR), IPGME&R Kolkata

Introduction: C.O.P.D is characterized by irreversible airflow limitation.Despite the availability of a host of medications a C.O.P.D patient suffers from physical disability ranging from mild exercise intolerance to limitation of ADL.

Type of study: Prospective case control study.

Place of study: S.N.P.Hospital Kolkata.

Methodology: The study was conducted on 40 patients of C.O.P.D who fell in 2nd stage of GOLD criteria, to assess the role of peripheral exercise in rehabilitation.The patients were divided in two groups of 20 each.

The groups received the following treatment regimen:-

GROUP 1:

Drugs
Specific chest exercises.
Occupational therapy.
Nutritional supplementation.

GROUP 2:

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Peripheral exercises.
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Subjects reported to the training facility three times a week for 1.5 hrs each session. The total duration of training of each subject was 8 weeks.

Result analysis: Results were analyzed by comparing the BODE index of patients before the beginning of programme with that of after completion of 8 weeks of programme.

Result:Result showed a better improvement in BODE index of the second group in comparison to that of the firstGroup.

Conclusion: The findings of this study relates to short term impact of peripheral exercise on the activity of c.o.p.d patients & may contribute to improving programmes by addressing patient needs.

Keywords: C.O.P.D, Pulmonary rehabilitation, Peripheral exercises.

O10

Differently abled in the service of the differently abled

Sundar S

Objective: To explore and implement a new model of vocational rehabilitation in which hearing impaired children are trained to make ocular prosthesis

Methods: Freedom trust nurtures exceptionally talented hearing and speech impaired children and gives them a scholarship to develop their talents. Some of these children have become excellent artists and five of our artists have received National awards. These differently abled children need to take up a profession after the skills have been imparted.

An artificial eye is a cosmetic aid which improves the appearance without any vision. People who have lost their eye either due to injury or tumor or any blind shrunken eye are ideal candidates for artificial eye fitting. Making an artificial eye needs a lot of painting, involves many procedures and takes about 8 hours to complete one shell. Children who are good at art and who are differently abled are trained by a senior ocularist for one year and after the training they have been absorbed into a sheltered work shop where they make ocular prosthesis under supervision.

Results: Over the last one year, since inception 55 patients have been given ocular prostheses and are well integrated with their new eyes. The uniqueness of this new approach is that differently abled children who have outstanding talent in art are vocationally trained and placed in a sheltered workshop where patients with visual disability are cosmetically rehabilitated.

O11

Power wheelchair for all in need-towards accomplishment of a vision

Anees Javed

We a group of professionals including a doctor-Physiatrist, Alumni of Calicut Medical College and engineers-who are eminent professors and Students at National Institute of Technology, Calicut have decided to build a movement for making millions of differently abled person's life better via science and technology incorporated with our social and cultural values. We want to concentrate on issues faced by our physically challenged brothers and sisters who are also challenged by money from accessing technology for their pride and survival. Now we are successful in making worlds cheapest but efficient power wheel chair which we want to provide to the needy after assessing the familial and disease condition with the help of Disabled Persons Organizations, Palliative Care Units and Other NGOs.

This study is regarding cost effectiveness of the Power Wheel Chairs we made and a chance to live demonstrate this power wheel chair will be inspirational to my fellow Physiatrists

Study setting: Palliative care Unit, Ponnani, THQH and National Institute of Technology, Calicut.

years of age. Children with normal nutrition were taken as controls and those with undernutrition were taken as cases. The study found that undernutrition was a severe health problem in cerebral palsy children and the risk factors were also found out. The main risk factors were oromotor dysfunction, presence of medical problems, GMFCS levels.

O5

Efficacy of spinal brace in preventing progression of adolescent idiopathic scoliosis

Sreekala V K

Professor & HOD, Department of PM & R, Medical College, Trivandrum

Eighteen adolescent girls in the age group of 10 to 16 were studied in June 2010 to May 2012. Of these two had to undergo surgery as the curve was more than 50 degree Cobb's angle at the time of first presentation (11%). Out of 16, 12 have remained the same improved (75%). All 16 were treated with very low temperature Thermoplastic Spinal brace. One interesting finding is that irrespective of the duration of wearing the brace none worsened / progressed during the period of study.

Keywords: Adolescent Idiopathic Scoliosis, Spinal Brace.

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Design: Descriptive study

Settings: Inpatients in Dept .of Physical Medicine & Rehabilitation, Calicut Medical College

Study tool: Spinal cord injury patients with pressure ulcer

Period of study: 1st November 2011 to 31st May 2012

Inclusion criteria: Patients with pressure ulcer of stages 2,3 &4 who required tissue biopsy for culture and sensitivity.

Exclusion criteria: Patients with cognitive impairment, patients without significant caregiver.

Procedure: Subjects were taken into study with written informed consent. A bit of tissue is biopsied from the edge of the ulcer along with those taken for culture and sensitivity and send separately to department of pathology for histopathological examination.

Results: The salient histopathological features of stage 2, 3 & 4 pressure ulcers is studied.

Conclusion: Discuss if the knowledge of microscopic details help in improving management of pressure ulcers.

Keywords: Pressure ulcers, Histopathology

O8

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Zachariah T[1], Sreekala V K[2], Surendran A[3]

[1]Junior Resident, [2]Prof and HOD, [3]Addl Prof
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Objectives: To study the Quality of Life (QOL) of inmates of oldage homes in the urban part of Thiruvananthapuram district using SF36 QOL Questionnaire.

To assess the functional status of these inmates of Oldage homes using Barthel Index.

Design: Descriptive Cross-sectional Study

Setting: Oldage homes in the urban part of Thiruvananthapuram District.

Population or Participants: People selected by following inclusion and exclusion criteria

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Exclusion Criteria: Bed ridden patients
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Patients with dementia, parkinsonism, etc
Malignancy

Period of Study: 1 year.

Method of Sampling: Conveniently selected oldage homes in urban area of Thiruvananthapuram district.

Methodology: Study to be conducted using self developed Proforma and Questionnaires by Interview method.

Outcome Measures: SF36 QOL Questionnaire: It is a generic measure which consists of 36 questions spanning 8 domains. It has been validated for geriatric population.

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Introduction: C.O.P.D is characterized by irreversible airflow limitation.Despite the availability of a host of medications a C.O.P.D patient suffers from physical disability ranging from mild exercise intolerance to limitation of ADL.

Type of study: Prospective case control study.

Place of study: S.N.P.Hospital Kolkata.

Methodology: The study was conducted on 40 patients of C.O.P.D who fell in 2nd stage of GOLD criteria, to assess the role of peripheral exercise in rehabilitation.The patients were divided in two groups of 20 each.

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O10

Differently abled in the service of the differently abled

Sundar S

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Period of Study: 1 year.

Method of Sampling: Conveniently selected oldage homes in urban area of Thiruvananthapuram district.

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O9

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Place of study: S.N.P.Hospital Kolkata.

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O10

Differently abled in the service of the differently abled

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An artificial eye is a cosmetic aid which improves the appearance without any vision. People who have lost their eye either due to injury or tumor or any blind shrunken eye are ideal candidates for artificial eye fitting. Making an artificial eye needs a lot of painting, involves many procedures and takes about 8 hours to complete one shell. Children who are good at art and who are differently abled are trained by a senior ocularist for one year and after the training they have been absorbed into a sheltered work shop where they make ocular prosthesis under supervision.

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Study setting: Palliative care Unit, Ponnani, THQH and National Institute of Technology, Calicut.

Objectives of investigation: To construct a power wheel chair which is cheapest and efficient

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Conclusion: This study will be completed by dec31 this year which completes the second stage of our research development. With indigenous material and proper scientific attitude we can make quality assistive devices at very cheap cost.

Keywords: Power wheel chair, Assistive technology, Low cost, Functional evaluation of wheel chair questionnaire

O12

Nutritional status of adolescent children with reference to prevalence of obesity in a Chandigarh school – a pilot study

Gogia Virinder Singh[1], Kumar Deepak[2]

[1]Assistant Professor, [2]Senior Resident
Department of Physical & Rehabilitation Medicine, Post Graduate Institute of Medical Education & Research (PGIMER), Chandigarh, India

Aims: To estimate the prevalence of Obesity in adolescents attending school in the north Indian city of Chandigarh.

Research Design and Methods: A Pilot Project was undertaken on total of 75 adolescents (Boys/Girl= 42/33) attending a private school (aged 11-15 years) participated in a community-based cross-sectional survey. Anthropometric examination included height, weight, body mass index, waist circumference, hip circumference, waist-hip ratio and blood pressure measurement.Socio-demographic characteristics and Lifestyle parameters were investigated using a questionnaire. Nutritional status in terms of BMI,was determined, using Centre for Disease Control (CDC), USA,BMI for Age percentile charts.

Results and conclusions will be shared in the presentation.

O13

Role of physical activity and dietary measures in addition to calcium and vitamin D supplementation in the prevention of osteoporosis in postmenopausal women

Tripathi D R[1], Talele Mahesh[2], Preenja Ravi[2], Sharma Amod[2]

[1]Senior specialist and associate professor and head of department
[2]Senior resident, Department of physical medicine and rehabilitation, PGIMER, Dr. Ram Manohar Lohia Hospital, New Delhi

Background: Inadequate physical activity and dietary intake of calcium and vitamin D contribute to the high prevalence of osteoporosis among elderly women.The purpose of this study was to find out the relation of diet, physical activity and calcium, vitamin D3 to bone mineral density in postmenopausal women and to assess their effects in the prevention of osteoporosis in postmenopausal women.

Methods: We screened elderly postmenopausal women (age >50 years) without any co-morbidities (subjects N=73) on OPD basis for bone mineral density (using DEXA scan of 3 sites spine, hip and neck of femur and total body). On the basis of detailed present and past history of diet (calcium content), physical activity levels (using duration and type of activity as per GPPAQ general practice physical activity questionnaire) and laboratory tests (serum calcium, serum phosphorus, vitamin D3 levels), we identified effects of each of them on bone mineral density (age matched Z scores). The subjects were then classified into 2 groups A and B. Group A (N=23) included osteoporotic subjects (BMD T<-2.5) and Group B (N=50) included osteopenic subjects (BMD T>-2.5). All subjects were given dietary advice and asked to practice regular physical activity including exercises along with rich diet supplemented with 500 mg of calcium plus 700 IU of vitamin D (cholecalciferol) per day. Bone mineral density (age matched Z scores) was measured by dual-energy x-ray absorptiometry every twelve months.

Result: The correlation between physical activity, calcium, vitamin D3 levels and bone mineral density was determined by regression analysis. The strongest association was found between stair climbing and walking speed and duration of weight bearing activities and hip (femur) total body bone mineral densities.

Conclusion: The positive association between stair climbing and walking speed and duration of weight bearing activities and hip (femur) cortical bone measures in postmenopausal women may indicate a lifestyle factor in addition to calcium and vitamin D3 supplementation that can help prevent bone loss. Given the significantly greater hours per week of weight bearing physical activity done by subjects, duration is an important determinant of the effect physical activity has on bone.

Keywords: General Practice Physical Activity Questionnaire, bone mineral density

O14

Obesity and depression–are they related….?

Anupama K, Chandran Roy R, Gafoor S Abdul

Background: Obesity and depression –both are common clinical conditions with important deleterious effects on health outcomes. Strong evidence suggests their association with functional limitations. Hence, a study was taken up to assess the relation between obesity and depression.

Study design: Descriptive study.

Objectives: To study the prevalence of depression in obesity and to assess if there is an association between the two conditions.

Setting: Lifestyle disease management clinic, Dept. of PM&R, Medical College, Calicut

Methods: Anthropometric measures were taken, BMI calculated by dividing the subject's weight in kilograms by the square of his or her height in metres. Depression was assessed using PHQ [Patient Health Questionnaire]. Statistical analysis was done using spss16 software.

Results and conclusions: Prevalence of depression was found to be more amongst the obese compared to those with a normal BMI. There was found to be a significant association between obesity and depression. [p value <0.05]. Thus, it is important to evaluate

Period of Study: 1 year.

Method of Sampling: Conveniently selected oldage homes in urban area of Thiruvananthapuram district.

Methodology: Study to be conducted using self developed Proforma and Questionnaires by Interview method.

Outcome Measures: SF36 QOL Questionnaire: It is a generic measure which consists of 36 questions spanning 8 domains. It has been validated for geriatric population.

Barthel Index: It is to assess the level of functional independence/ dependence for ten Activities of Daily Living (ADLs) primarily related to personal care and mobility. It tests ten ADLs including the ability to independently feed oneself, bathe, groom oneself, control of bowels and bladder, toilet use, transfers, mobility on level surfaces and stairs. It has a point value for each section. A higher score means the patient is more independent.

O9

Study to assess the role of peripheral exercise in rehabilitation of C.O.P.D patients

Chirania Anirudh[1], Biswas M M[2], Saha Jayanta[3], Sen M[4], Pramanik R[5]

[1]PGT DNB (PMR), [2]MD, DNB Senior consultant (PMR), [3]MD Senior consultant (PMR), [4]DNB Junior consultant (PMR): S.N.P. Hospital Kolkata;

[5]MD, MRCP Assistant Professor (PMR), IPGME&R Kolkata

Introduction: C.O.P.D is characterized by irreversible airflow limitation.Despite the availability of a host of medications a C.O.P.D patient suffers from physical disability ranging from mild exercise intolerance to limitation of ADL.

Type of study: Prospective case control study.

Place of study: S.N.P.Hospital Kolkata.

Methodology: The study was conducted on 40 patients of C.O.P.D who fell in 2nd stage of GOLD criteria, to assess the role of peripheral exercise in rehabilitation.The patients were divided in two groups of 20 each.

The groups received the following treatment regimen:-

GROUP 1:

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Specific chest exercises.
Occupational therapy.
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Subjects reported to the training facility three times a week for 1.5 hrs each session. The total duration of training of each subject was 8 weeks.

Result analysis: Results were analyzed by comparing the BODE index of patients before the beginning of programme with that of after completion of 8 weeks of programme.

Result:Result showed a better improvement in BODE index of the second group in comparison to that of the firstGroup.

Conclusion: The findings of this study relates to short term impact of peripheral exercise on the activity of c.o.p.d patients & may contribute to improving programmes by addressing patient needs.

Keywords: C.O.P.D, Pulmonary rehabilitation, Peripheral exercises.

O10

Differently abled in the service of the differently abled

Sundar S

Objective: To explore and implement a new model of vocational rehabilitation in which hearing impaired children are trained to make ocular prosthesis

Methods: Freedom trust nurtures exceptionally talented hearing and speech impaired children and gives them a scholarship to develop their talents. Some of these children have become excellent artists and five of our artists have received National awards. These differently abled children need to take up a profession after the skills have been imparted.

An artificial eye is a cosmetic aid which improves the appearance without any vision. People who have lost their eye either due to injury or tumor or any blind shrunken eye are ideal candidates for artificial eye fitting. Making an artificial eye needs a lot of painting, involves many procedures and takes about 8 hours to complete one shell. Children who are good at art and who are differently abled are trained by a senior ocularist for one year and after the training they have been absorbed into a sheltered work shop where they make ocular prosthesis under supervision.

Results: Over the last one year, since inception 55 patients have been given ocular prostheses and are well integrated with their new eyes. The uniqueness of this new approach is that differently abled children who have outstanding talent in art are vocationally trained and placed in a sheltered workshop where patients with visual disability are cosmetically rehabilitated.

O11

Power wheelchair for all in need-towards accomplishment of a vision

Anees Javed

We a group of professionals including a doctor-Physiatrist, Alumni of Calicut Medical College and engineers-who are eminent professors and Students at National Institute of Technology, Calicut have decided to build a movement for making millions of differently abled person's life better via science and technology incorporated with our social and cultural values. We want to concentrate on issues faced by our physically challenged brothers and sisters who are also challenged by money from accessing technology for their pride and survival. Now we are successful in making worlds cheapest but efficient power wheel chair which we want to provide to the needy after assessing the familial and disease condition with the help of Disabled Persons Organizations, Palliative Care Units and Other NGOs.

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and treat depression in persons who seek treatment for obesity to enhance clinical outcome.

Keywords: obesity, depression.

O15

Effectiveness of metformin in the management of obesity among young adults

Selvan P[1], Sreekala V K[2], Vijayalekshmi L[3]

[1]MD Trainee, PM&R, [2]Professor & HOD, Dept. of PM&R, [3]Professor of Biochemistry & HOD, Dept. of Applied Nutrition
Medical College, Trivandrum

Primary Objective: To assess the effectiveness of metformin in a dose of 1000mg. sustained release daily for six months in the management of obesity along with the Life Style Interventions compared to the Life Style Intervention alone among the patients with BMI >25, aged 20 to 60 yrs attending Obesity Clinic, Medical College, Trivandrum.

Methods: A Randomized Control Trial was conducted in the Obesity Clinic, Department of PM&R, Medical College, Trivandrum. Sample size of 40 Patients satisfying the inclusion and exclusion criteria were randomly divided into two groups by block randomization technique. In both groups, Life Style Intervention and Dietary advice were given. In addition to this, Metformin 1000mg sustained release tablet was given to the group II, daily orally for six months.

Body weight, Height, Fat Percentage, Waist Circumference, Blood Pressure, Post prandial blood sugar were checked at the first visit, after 1 month, 3 month and six months intervals. The values obtained were put into the software, SPSS.

Findings: At the end of six months, the mean weight reduction in the control group was 1.49kg with a standard deviation of 1.48. The mean weight reduction in the metformin group was 5.88 kg with a standard deviation of 2.03. The P value was <0.001. The mean BMI reduction in the control group was 0.58kg/m^2 with a standard deviation of 0.78; in the metformin group it was 2.45kg/m^2 with a standard deviation of 0.98. The P value was 0. The mean fat percentage reduction in the control group was 1.5% with a standard deviation of 4.96 and in the metformin group was 6.65% with a standard deviation of 7.02. The P value was 0.011. The mean reduction of waist circumference in the control group was 3.1cm with a standard deviation of 2.59 and in the metformin group was 4.55cm with a standard deviation of 3.59. The P – value is 0.151. There was no much change in the PPBS of both control and metformin group.

Conclusion: The observations clearly show the effectiveness of metformin in the management of obesity. The reduction of weight, BMI and fat percentage was significant in the metformin group than in the control group (P value <0.05%). But the reduction of waist circumference was not significant. No hypoglycemia was associated with metformin.

Limitation of the Study: Short duration study.

O16

Preliminary study on risk factor assessment of osteoporosis in post menopausal women

Chauhan Sonal

Brief Summary: Osteoporosis is a skeletal disorder characterized by low bone mass, increased bone fragility and susceptibility to fracture. Approximately one in two women will have osteoporosis related fracture in their life time putting a lot of burden on health care facility and the patients. Life style factors such as tobacco use, exercise and body weight, nutrition etc. appears to play a role in bone health and osteoporosis risk.

Aim & Objectives: To assess the prevalence of osteoporosis in healthy ambulatory post-menopausal women.

To study the various Risk factor and their influence on bone mineral density including various life style factors like dietary intake of calcium, vitamin D3 level, body mass index, activity level measured by General Practice Physical Activity Questionnaire (GPPAQ).

Methods: Total of 70 healthy women with amenorrhea in the previous one year were included in the study.

Results: In our study 66% of women were found to be osteoporotic.70% of our patients had low vitamin D3 level. 62% of our patients were aware about osteoporosis and its implication. Amount of daily calcium intake was much below recommended. 24%of our subjects were moderately active. None were active and 50% were inactive using the GPPAQ.

Conclusion: This study has shown that a large % of our population is osteoporotic. Prevalence of various risk factors is also very high. Though how much of these factors actually influence BMD can actually be said only after completion and statically analyzing the data.

O17

Lower extremity functional scale and diabetic foot ulcers: a descriptive pilot study

Saikia Priyanka, Jose Naveen Mathew

Objective: To assess the lower extremity functional status in the diabetic foot ulcer population. The purpose was to assess the ambulation status prior to offloading interventions.

Subject: 30 people with diabetic foot ulcers of Wagner Grade 2 and 3 were assessed in SJMCH OPD

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Results: Lower extremity function was moderate to severely affected in areas of ambulation (walking, climbing stairs, running, taking turns) and mildly affected in areas of daily activities (bathing, squatting, household work).

Conclusion: Lower extremity function is significantly affected in people with diabetic foot ulcers. Further study is required to know the functional status post offloading.

O18

A study to compare the effectiveness between epidural methylprednisolone injection and intranasal calcitonin in reduction of back pain due to osteoporosis in postmenopausal patients

Singh Th Khelendro[1], Singh A K Joy[2]

[1]MD (PGT), [2]Professor and HOD
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Aims and objective: To compare the effectiveness between

Objectives of investigation: To construct a power wheel chair which is cheapest and efficient

Methods used: 1) Cost comparison study; 2)Functional Evaluation of Wheel Chair Questionnaire :Using this validated questionnaire we have assessed patient satisfaction and functional ability in comparison with those using our wheel chairs with that of another company wheel chair with similar specifications

Results: Cost of our wheel chair was only 20%-33% of other similar companies while patient satisfaction was comparable with the compared wheel chair-on pilot study with 5 persons.

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Conclusion: This study will be completed by dec31 this year which completes the second stage of our research development. With indigenous material and proper scientific attitude we can make quality assistive devices at very cheap cost.

Keywords: Power wheel chair, Assistive technology, Low cost, Functional evaluation of wheel chair questionnaire

O12

Nutritional status of adolescent children with reference to prevalence of obesity in a Chandigarh school – a pilot study

Gogia Virinder Singh[1], Kumar Deepak[2]

[1]Assistant Professor, [2]Senior Resident
Department of Physical & Rehabilitation Medicine, Post Graduate Institute of Medical Education & Research (PGIMER), Chandigarh, India

Aims: To estimate the prevalence of Obesity in adolescents attending school in the north Indian city of Chandigarh.

Research Design and Methods: A Pilot Project was undertaken on total of 75 adolescents (Boys/Girl= 42/33) attending a private school (aged 11-15 years) participated in a community-based cross-sectional survey. Anthropometric examination included height, weight, body mass index, waist circumference, hip circumference, waist-hip ratio and blood pressure measurement.Socio-demographic characteristics and Lifestyle parameters were investigated using a questionnaire. Nutritional status in terms of BMI,was determined, using Centre for Disease Control (CDC), USA,BMI for Age percentile charts.

Results and conclusions will be shared in the presentation.

O13

Role of physical activity and dietary measures in addition to calcium and vitamin D supplementation in the prevention of osteoporosis in postmenopausal women

Tripathi D R[1], Talele Mahesh[2], Preenja Ravi[2], Sharma Amod[2]

[1]Senior specialist and associate professor and head of department
[2]Senior resident, Department of physical medicine and rehabilitation, PGIMER, Dr. Ram Manohar Lohia Hospital, New Delhi

Background: Inadequate physical activity and dietary intake of calcium and vitamin D contribute to the high prevalence of osteoporosis among elderly women.The purpose of this study was to find out the relation of diet, physical activity and calcium, vitamin D3 to bone mineral density in postmenopausal women and to assess their effects in the prevention of osteoporosis in postmenopausal women.

Methods: We screened elderly postmenopausal women (age >50 years) without any co-morbidities (subjects N=73) on OPD basis for bone mineral density (using DEXA scan of 3 sites spine, hip and neck of femur and total body). On the basis of detailed present and past history of diet (calcium content), physical activity levels (using duration and type of activity as per GPPAQ general practice physical activity questionnaire) and laboratory tests (serum calcium, serum phosphorus, vitamin D3 levels), we identified effects of each of them on bone mineral density (age matched Z scores). The subjects were then classified into 2 groups A and B. Group A (N=23) included osteoporotic subjects (BMD T<-2.5) and Group B (N=50) included osteopenic subjects (BMD T>-2.5). All subjects were given dietary advice and asked to practice regular physical activity including exercises along with rich diet supplemented with 500 mg of calcium plus 700 IU of vitamin D (cholecalciferol) per day. Bone mineral density (age matched Z scores) was measured by dual-energy x-ray absorptiometry every twelve months.

Result: The correlation between physical activity, calcium, vitamin D3 levels and bone mineral density was determined by regression analysis. The strongest association was found between stair climbing and walking speed and duration of weight bearing activities and hip (femur) total body bone mineral densities.

Conclusion: The positive association between stair climbing and walking speed and duration of weight bearing activities and hip (femur) cortical bone measures in postmenopausal women may indicate a lifestyle factor in addition to calcium and vitamin D3 supplementation that can help prevent bone loss. Given the significantly greater hours per week of weight bearing physical activity done by subjects, duration is an important determinant of the effect physical activity has on bone.

Keywords: General Practice Physical Activity Questionnaire, bone mineral density

O14

Obesity and depression–are they related….?

Anupama K, Chandran Roy R, Gafoor S Abdul

Background: Obesity and depression –both are common clinical conditions with important deleterious effects on health outcomes. Strong evidence suggests their association with functional limitations. Hence, a study was taken up to assess the relation between obesity and depression.

Study design: Descriptive study.

Objectives: To study the prevalence of depression in obesity and to assess if there is an association between the two conditions.

Setting: Lifestyle disease management clinic, Dept. of PM&R, Medical College, Calicut

Methods: Anthropometric measures were taken, BMI calculated by dividing the subject's weight in kilograms by the square of his or her height in metres. Depression was assessed using PHQ [Patient Health Questionnaire]. Statistical analysis was done using spss16 software.

Results and conclusions: Prevalence of depression was found to be more amongst the obese compared to those with a normal BMI. There was found to be a significant association between obesity and depression. [p value <0.05]. Thus, it is important to evaluate

and treat depression in persons who seek treatment for obesity to enhance clinical outcome.

Keywords: obesity, depression.

O15

Effectiveness of metformin in the management of obesity among young adults

Selvan P[1], Sreekala V K[2], Vijayalekshmi L[3]

[1]MD Trainee, PM&R, [2]Professor & HOD, Dept. of PM&R, [3]Professor of Biochemistry & HOD, Dept. of Applied Nutrition
Medical College, Trivandrum

Primary Objective: To assess the effectiveness of metformin in a dose of 1000mg. sustained release daily for six months in the management of obesity along with the Life Style Interventions compared to the Life Style Intervention alone among the patients with BMI >25, aged 20 to 60 yrs attending Obesity Clinic, Medical College, Trivandrum.

Methods: A Randomized Control Trial was conducted in the Obesity Clinic, Department of PM&R, Medical College, Trivandrum. Sample size of 40 Patients satisfying the inclusion and exclusion criteria were randomly divided into two groups by block randomization technique. In both groups, Life Style Intervention and Dietary advice were given. In addition to this, Metformin 1000mg sustained release tablet was given to the group II, daily orally for six months.

Body weight, Height, Fat Percentage, Waist Circumference, Blood Pressure, Post prandial blood sugar were checked at the first visit, after 1 month, 3 month and six months intervals. The values obtained were put into the software, SPSS.

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[1]Assistant Professor, [2]Senior Resident
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Aims: To estimate the prevalence of Obesity in adolescents attending school in the north Indian city of Chandigarh.

Research Design and Methods: A Pilot Project was undertaken on total of 75 adolescents (Boys/Girl= 42/33) attending a private school (aged 11-15 years) participated in a community-based cross-sectional survey. Anthropometric examination included height, weight, body mass index, waist circumference, hip circumference, waist-hip ratio and blood pressure measurement.Socio-demographic characteristics and Lifestyle parameters were investigated using a questionnaire. Nutritional status in terms of BMI,was determined, using Centre for Disease Control (CDC), USA,BMI for Age percentile charts.

Results and conclusions will be shared in the presentation.

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Study design: Descriptive study.

Objectives: To study the prevalence of depression in obesity and to assess if there is an association between the two conditions.

Setting: Lifestyle disease management clinic, Dept. of PM&R, Medical College, Calicut

Methods: Anthropometric measures were taken, BMI calculated by dividing the subject's weight in kilograms by the square of his or her height in metres. Depression was assessed using PHQ [Patient Health Questionnaire]. Statistical analysis was done using spss16 software.

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Brief Summary: Osteoporosis is a skeletal disorder characterized by low bone mass, increased bone fragility and susceptibility to fracture. Approximately one in two women will have osteoporosis related fracture in their life time putting a lot of burden on health care facility and the patients. Life style factors such as tobacco use, exercise and body weight, nutrition etc. appears to play a role in bone health and osteoporosis risk.

Aim & Objectives: To assess the prevalence of osteoporosis in healthy ambulatory post-menopausal women.

To study the various Risk factor and their influence on bone mineral density including various life style factors like dietary intake of calcium, vitamin D3 level, body mass index, activity level measured by General Practice Physical Activity Questionnaire (GPPAQ).

Methods: Total of 70 healthy women with amenorrhea in the previous one year were included in the study.

Results: In our study 66% of women were found to be osteoporotic.70% of our patients had low vitamin D3 level. 62% of our patients were aware about osteoporosis and its implication. Amount of daily calcium intake was much below recommended. 24%of our subjects were moderately active. None were active and 50% were inactive using the GPPAQ.

Conclusion: This study has shown that a large % of our population is osteoporotic. Prevalence of various risk factors is also very high. Though how much of these factors actually influence BMD can actually be said only after completion and statically analyzing the data.

O17

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O18

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[1]MD (PGT), [2]Professor and HOD
Department of Physical Medicine and Rehabilitation, RIMS, Imphol

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and treat depression in persons who seek treatment for obesity to enhance clinical outcome.

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O15

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Body weight, Height, Fat Percentage, Waist Circumference, Blood Pressure, Post prandial blood sugar were checked at the first visit, after 1 month, 3 month and six months intervals. The values obtained were put into the software, SPSS.

Findings: At the end of six months, the mean weight reduction in the control group was 1.49kg with a standard deviation of 1.48. The mean weight reduction in the metformin group was 5.88 kg with a standard deviation of 2.03. The P value was <0.001. The mean BMI reduction in the control group was 0.58kg/m^2 with a standard deviation of 0.78; in the metformin group it was 2.45kg/m^2 with a standard deviation of 0.98. The P value was 0. The mean fat percentage reduction in the control group was 1.5% with a standard deviation of 4.96 and in the metformin group was 6.65% with a standard deviation of 7.02. The P value was 0.011. The mean reduction of waist circumference in the control group was 3.1cm with a standard deviation of 2.59 and in the metformin group was 4.55cm with a standard deviation of 3.59. The P – value is 0.151. There was no much change in the PPBS of both control and metformin group.

Conclusion: The observations clearly show the effectiveness of metformin in the management of obesity. The reduction of weight, BMI and fat percentage was significant in the metformin group than in the control group (P value <0.05%). But the reduction of waist circumference was not significant. No hypoglycemia was associated with metformin.

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Aims and objective: To compare the effectiveness between

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Setting and Design: A Randomised Controlled Trial in a tertiary hospital.

Meterials and Methods: Hundred patients with back pain due to postmenopausal osteoporosis who fulfilled the inclusion criteria were selected for the study. The patients were divided into two equal groups (calcitonin group and epidural steroid group) and back pain severity was assessed by VAS on daily basis from the day of initiation of therapy till 21 days.

Results: In the epidural group, 5 (10%) and 22 (44%) of patients got pain relief on the first and second day of post therapy periods respectively with median value of 2 days±7.8SD while in calcitonin group 16%(n=12), 12%(n=6) and 18%(n=9) of patients got pain relieved on 12, 13 and 14 days of the initiation of intranasal therapy respectively with median value of 15 days±3.7SD.

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Keywords: Osteoporosis, back pain, calcitonin, epidural steroid, visual analoque scale(VAS).

O19

Cervical spondylosis – a soft target

Pramanik R

MD, MRCP (UK), Assistant Professor, PMR, IPGMER, Kolkata, India

Introduction: It's really a common practice to victimize CS as a cause of vertigo in this part of India. This presentation is a sincere and humble effort to emphasize the role of clinical judgments diagnostic skills or aptitude in the field of rehabilitation Medicine.

Methods: This is a presentation based on the observations in OPD of Department of PMR in IPGMER, Kolkata from July 2009 to October 2012. This is a case series of so called cervical spondylosis presented to Department of PMR for rehabilitation.

Results: According to my experience in one of the apical hospital in a big state of India cervical spondylosis is frequently picked up as a cause of vertigo and dizzy spells without performing a Dix Hal pike test. This case series are consisting of cases of vertigo due to amurosis fugax, aortic stenosis, atrial fibrillation etc. which were actually referred to Department of PMR as cervical spondylosis. Even the patient with Pan Coast tumor has been refereed as a case of radiculopathy of cervical spondylosis.

Discussion: Caries spine is really common cause of any part of spinal pain. This presentation is consisting of few atypical presentation of tubercular infection of spine leading to spinal pain mimicking CS. Sometimes it becomes very difficult to pick up exact causes of neck pain or radicular pain or vertigo or dizzy spells. Clinical skills and aptitude can only save cervical spondylosis as soft target of the above chief complains.

Potential implications: This case series are pointing towards lack of expertise and thorough examination and investigation for the cause of vertigo and neck pain in this part of the world.

O20

Treatment of congenital clubfoot–a challenge for rehabilitation

Sahoo J[1], Mohanty R N[2], Das S P[3]

[1]DNB (Ortho), DNB (PMR), Lecturer, [2]HOD, [3]Asst. Prof.
Dept of PMR, SVNIRTAR, Cuttack, Odisha

Objective of Study: About 1 in every 1000 children is born with clubfoot worldwide. Children having club foot are often abandoned or face a future in poverty. By correcting their feet, they get the opportunity to live a normal life. Surgeons report that Clubfeet treated by surgical methods become weak, stiff and are often painful in adult life. The Ponseti method is a very effective and relatively inexpensive treatment with good long term results. In this study I have tried to evaluate the effectiveness of Ponseti method in physiatrist practice.

Material & Methods: 18 patients having 29 club feet (11 B/L & 7 U/L) were treated as Out patients from January 2010 to june 2012 at Physical Medicine & Rehabilitation Department of SVNIRTAR, Cuttack. All feet are evaluated by pirani scoring and follow the ponseti method of treatment.

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O21

Interventional Physiatry – Calicut Experience

Sobeekrishna G S

O22

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Kataruka Mohit[1], Pramanik R[2], Halder R N[3]

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Aims & Objectives:

1.To find out accuracy of USG as diagnostic tool in CTS
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Study design: Prospective cross sectional analytical study.

Study population: Patients attending PM&R OPD, IPGME&R, with suspected CTS

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Keyword: Club foot, Pirani scoring, ponseti method

O21

Interventional Physiatry – Calicut Experience

Sobeekrishna G S

O22

Can musculoskelital USG replace NCS in management of CTS?

Kataruka Mohit[1], Pramanik R[2], Halder R N[3]

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Introduction: USG has several advantages like easy availability, short procedure time, non invasive, can localize or understand better pathological lesion causing entrapment, short waiting time etc. Over the years NCS has been used to diagnose and monitor the patients with carpal tunnel syndrome (CTS). But USG can fairly pick up the carpal tunnel as per the literature. This study has been done to find out the diagnostic accuracy of USG.

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1.To find out accuracy of USG as diagnostic tool in CTS
2. To compare the efficacy of USG with standard NCS in CTS

Study design: Prospective cross sectional analytical study.

Study population: Patients attending PM&R OPD, IPGME&R, with suspected CTS

and treat depression in persons who seek treatment for obesity to enhance clinical outcome.

Keywords: obesity, depression.

O15

Effectiveness of metformin in the management of obesity among young adults

Selvan P[1], Sreekala V K[2], Vijayalekshmi L[3]

[1]MD Trainee, PM&R, [2]Professor & HOD, Dept. of PM&R, [3]Professor of Biochemistry & HOD, Dept. of Applied Nutrition
Medical College, Trivandrum

Primary Objective: To assess the effectiveness of metformin in a dose of 1000mg. sustained release daily for six months in the management of obesity along with the Life Style Interventions compared to the Life Style Intervention alone among the patients with BMI >25, aged 20 to 60 yrs attending Obesity Clinic, Medical College, Trivandrum.

Methods: A Randomized Control Trial was conducted in the Obesity Clinic, Department of PM&R, Medical College, Trivandrum. Sample size of 40 Patients satisfying the inclusion and exclusion criteria were randomly divided into two groups by block randomization technique. In both groups, Life Style Intervention and Dietary advice were given. In addition to this, Metformin 1000mg sustained release tablet was given to the group II, daily orally for six months.

Body weight, Height, Fat Percentage, Waist Circumference, Blood Pressure, Post prandial blood sugar were checked at the first visit, after 1 month, 3 month and six months intervals. The values obtained were put into the software, SPSS.

Findings: At the end of six months, the mean weight reduction in the control group was 1.49kg with a standard deviation of 1.48. The mean weight reduction in the metformin group was 5.88 kg with a standard deviation of 2.03. The P value was <0.001. The mean BMI reduction in the control group was 0.58kg/m^2 with a standard deviation of 0.78; in the metformin group it was 2.45kg/m^2 with a standard deviation of 0.98. The P value was 0. The mean fat percentage reduction in the control group was 1.5% with a standard deviation of 4.96 and in the metformin group was 6.65% with a standard deviation of 7.02. The P value was 0.011. The mean reduction of waist circumference in the control group was 3.1cm with a standard deviation of 2.59 and in the metformin group was 4.55cm with a standard deviation of 3.59. The P – value is 0.151. There was no much change in the PPBS of both control and metformin group.

Conclusion: The observations clearly show the effectiveness of metformin in the management of obesity. The reduction of weight, BMI and fat percentage was significant in the metformin group than in the control group (P value <0.05%). But the reduction of waist circumference was not significant. No hypoglycemia was associated with metformin.

Limitation of the Study: Short duration study.

O16

Preliminary study on risk factor assessment of osteoporosis in post menopausal women

Chauhan Sonal

Brief Summary: Osteoporosis is a skeletal disorder characterized by low bone mass, increased bone fragility and susceptibility to fracture. Approximately one in two women will have osteoporosis related fracture in their life time putting a lot of burden on health care facility and the patients. Life style factors such as tobacco use, exercise and body weight, nutrition etc. appears to play a role in bone health and osteoporosis risk.

Aim & Objectives: To assess the prevalence of osteoporosis in healthy ambulatory post-menopausal women.

To study the various Risk factor and their influence on bone mineral density including various life style factors like dietary intake of calcium, vitamin D3 level, body mass index, activity level measured by General Practice Physical Activity Questionnaire (GPPAQ).

Methods: Total of 70 healthy women with amenorrhea in the previous one year were included in the study.

Results: In our study 66% of women were found to be osteoporotic.70% of our patients had low vitamin D3 level. 62% of our patients were aware about osteoporosis and its implication. Amount of daily calcium intake was much below recommended. 24%of our subjects were moderately active. None were active and 50% were inactive using the GPPAQ.

Conclusion: This study has shown that a large % of our population is osteoporotic. Prevalence of various risk factors is also very high. Though how much of these factors actually influence BMD can actually be said only after completion and statically analyzing the data.

O17

Lower extremity functional scale and diabetic foot ulcers: a descriptive pilot study

Saikia Priyanka, Jose Naveen Mathew

Objective: To assess the lower extremity functional status in the diabetic foot ulcer population. The purpose was to assess the ambulation status prior to offloading interventions.

Subject: 30 people with diabetic foot ulcers of Wagner Grade 2 and 3 were assessed in SJMCH OPD

Methods: The Lower Extremity Functional Scale (LEFS) was administered during the initial assessment. A descriptive analysis was conducted of the individual components of the LEFS.

Results: Lower extremity function was moderate to severely affected in areas of ambulation (walking, climbing stairs, running, taking turns) and mildly affected in areas of daily activities (bathing, squatting, household work).

Conclusion: Lower extremity function is significantly affected in people with diabetic foot ulcers. Further study is required to know the functional status post offloading.

O18

A study to compare the effectiveness between epidural methylprednisolone injection and intranasal calcitonin in reduction of back pain due to osteoporosis in postmenopausal patients

Singh Th Khelendro[1], Singh A K Joy[2]

[1]MD (PGT), [2]Professor and HOD
Department of Physical Medicine and Rehabilitation, RIMS, Imphol

Aims and objective: To compare the effectiveness between

epidural methylprednisolone injection and intranasal calcitonin in reduction of back pain due to osteoporosis in postmenopausal patients

Setting and Design: A Randomised Controlled Trial in a tertiary hospital.

Meterials and Methods: Hundred patients with back pain due to postmenopausal osteoporosis who fulfilled the inclusion criteria were selected for the study. The patients were divided into two equal groups (calcitonin group and epidural steroid group) and back pain severity was assessed by VAS on daily basis from the day of initiation of therapy till 21 days.

Results: In the epidural group, 5 (10%) and 22 (44%) of patients got pain relief on the first and second day of post therapy periods respectively with median value of 2 days±7.8SD while in calcitonin group 16%(n=12), 12%(n=6) and 18%(n=9) of patients got pain relieved on 12, 13 and 14 days of the initiation of intranasal therapy respectively with median value of 15 days±3.7SD.

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Keywords: Osteoporosis, back pain, calcitonin, epidural steroid, visual analoque scale(VAS).

O19

Cervical spondylosis – a soft target

Pramanik R

MD, MRCP (UK), Assistant Professor, PMR, IPGMER, Kolkata, India

Introduction: It's really a common practice to victimize CS as a cause of vertigo in this part of India. This presentation is a sincere and humble effort to emphasize the role of clinical judgments diagnostic skills or aptitude in the field of rehabilitation Medicine.

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Results: According to my experience in one of the apical hospital in a big state of India cervical spondylosis is frequently picked up as a cause of vertigo and dizzy spells without performing a Dix Hal pike test. This case series are consisting of cases of vertigo due to amurosis fugax, aortic stenosis, atrial fibrillation etc. which were actually referred to Department of PMR as cervical spondylosis. Even the patient with Pan Coast tumor has been refereed as a case of radiculopathy of cervical spondylosis.

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Potential implications: This case series are pointing towards lack of expertise and thorough examination and investigation for the cause of vertigo and neck pain in this part of the world.

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2. To compare the efficacy of USG with standard NCS in CTS

Study design: Prospective cross sectional analytical study.

Study population: Patients attending PM&R OPD, IPGME&R, with suspected CTS

Study place: Dept. of PM&R, IPGME&R, Kolkata.

Duration : 6 months (from 1st March, 2012 to 31st August 2012)

Sample size: 36

Inclusion criteria:

1. Patient with clinical diagnosis of CTS
2. Patient who give consent
3. Age 18 years
4. Both sex

Exclusion criteria:

1. Patient with clinical diagnosis of CTS
2. Patient who did not give consent
3. Age 18 years

Methodology: After getting institutional ethical committee clearance, all patients who fulfil the above criteria are included in the study & further diagnostic conformation done by the standard diagnostic criteria of NCS. The same group of patient have been also screened for radiological entrapment criteria for CTS.

Results: At the end of the study, the data were analysed by statistical tools shows that

1. Musculoskeletal USG has sensitivity of 92.3 with 95% CI of 74.9 to 99.1 and specificity of 70.0 with 95% CI of 34.8 to 93.3
2. Predictive value of +ve test is 88.9% with 95% CI of 70.8 – 97.7 and Predictive value of –ve test is 77.8% with 95% CI of 40 – 97.2.
3. Kappa study shows value of 0.64(0.36 – 0.93)

Conclusion:

1. Musculoskeletal USG is a good diagonostic tool for diagonosis of CTS
2. Musculoskeletal USG cannot be considered conclusive investigation for CTS as kappa study value is <0.7
3. Musculoskeletal USG can not replace NCS in diagnosis of CTS.

O23

Study to evaluate efficacy of local steroid injection in treatment of carpal tunnel syndrome with respect to subjective and objective clinical findings, electro physiologic and ultrasonographic parameters

Ali Junis

Objective: To Evaluate efficacy of local steroid injection in treatment of carpal tunnel syndrome with respect to subjective and objective clinical findings, electro physiologic and ultrasonographic parameters.

Methods: A prospective follow up study was conducted on 44 consecutive patients with 73 hands with symptomatic carpal tunnel syndrome (CTS) confirmed by ultrasonographically and electro physiologically. Patients were followed up for 3 months after steroid injection. Outcome measures were evaluated by improvement in VAS scale, Modified Boston Carpal Tunnel Questionnaire symptom and function scores, Electrophysiological and Ultrasonograhic parameters.

Results: After steroid injection significant improvement of pain was seen as measured with Visual analogue scale ($p < 0.001$). Statistically significant improvement were seen in grip strength, MBCTQ (Modified Boston Carpal Tunnel Questionnaire) symptom score and MBCTQ function score from baseline to 3 month follow-up ($P < 0.001$). Significant improvements were also noted in nerve conduction studies in sensory distal latency (SDL), mean distal latency (MDL), sensory nerve action potential (SNAP). We observed statistically significant reduction in cross sectional area of median nerve after 3 months follow up by ultrasound.

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O24

Study of effectiveness of gravity lumbar reduction therapy (GLRT) program in the treatment of symptomatic lumbar prolapse intervertebral disc (PIVD)

Rai Bijendra, Naorem Bimol, Singh Y Nandabir, Wangjam K

Aim: To study the effectiveness of gravity lumbar reduction therapy program in the treatment of symptomatic lumbar prolapse intervertebral disc.

Study design: Randomized control trial

Setting: Department of PMR, RIMS, Imphal

Participants: One hundred clinically diagnosed lumbar PIVD patients from September 2010 to March 2012

Intervention: Patients were randomly divided into intervention (A) and control (B) groups. Group A (53 patients) underwent GLRT from 45º with daily increments of 5º till 70º–90º was achieved. Group B (47 patients) received 3 doses of 80 mg methylprednisolone through intra-laminar epidural injection (ESI) at intervals of 1 week at the site of prolapse. Assessments were made at baseline, weekly for 3 weeks, then at 3rd and 6th months.

Outcome measures:

Visual analogue scale (VAS)
Spine specific functional measures–Oswestry Disability Index (ODI)
Straight leg raising test (SLRT)

Results: Improvements in VAS and ODI within each group were statistically significant (p value <.05). But the improvement in VAS and ODI between the two groups were not statistically significant (p value 0.07 and 0.13 respectively). There was also strong negative correlation between the reduction in VAS and ODI, and increase in degree of SLRT between both treatments as assessed by Pearson correlation test.

Conclusion: GLRT program is effective and safe in the treatment of symptomatic lumbar PIVD.

Keywords: Gravity lumbar reduction therapy, intra-laminar epidural injection, Oswestry Disability Index

O25

Comparative efficacy of platelet rich plasma injection, corticosteroid injection and ultrasonic therapy in the treatment of periarthritis shoulder

Singh Neha, Kothari S Y, Srikumar V

Objectives: To compare the effectiveness of Platelet rich plasma injection, Corticosteroid injection and Ultrasonic therapy in the treatment of Periarthritis shoulder in terms of decrease in pain, improvement in limitation of range of motion and functional improvement.

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Intervention: Patients were randomly divided into intervention (A) and control (B) groups. Group A (53 patients) underwent GLRT from 45º with daily increments of 5º till 70º–90º was achieved. Group B (47 patients) received 3 doses of 80 mg methylprednisolone through intra-laminar epidural injection (ESI) at intervals of 1 week at the site of prolapse. Assessments were made at baseline, weekly for 3 weeks, then at 3rd and 6th months.

Outcome measures:

Visual analogue scale (VAS)
Spine specific functional measures–Oswestry Disability Index (ODI)
Straight leg raising test (SLRT)

Results: Improvements in VAS and ODI within each group were statistically significant (p value <.05). But the improvement in VAS and ODI between the two groups were not statistically significant (p value 0.07 and 0.13 respectively). There was also strong negative correlation between the reduction in VAS and ODI, and increase in degree of SLRT between both treatments as assessed by Pearson correlation test.

Conclusion: GLRT program is effective and safe in the treatment of symptomatic lumbar PIVD.

Keywords: Gravity lumbar reduction therapy, intra-laminar epidural injection, Oswestry Disability Index

O25

Comparative efficacy of platelet rich plasma injection, corticosteroid injection and ultrasonic therapy in the treatment of periarthritis shoulder

Singh Neha, Kothari S Y, Srikumar V

Objectives: To compare the effectiveness of Platelet rich plasma injection, Corticosteroid injection and Ultrasonic therapy in the treatment of Periarthritis shoulder in terms of decrease in pain, improvement in limitation of range of motion and functional improvement.

epidural methylprednisolone injection and intranasal calcitonin in reduction of back pain due to osteoporosis in postmenopausal patients

Setting and Design: A Randomised Controlled Trial in a tertiary hospital.

Meterials and Methods: Hundred patients with back pain due to postmenopausal osteoporosis who fulfilled the inclusion criteria were selected for the study. The patients were divided into two equal groups (calcitonin group and epidural steroid group) and back pain severity was assessed by VAS on daily basis from the day of initiation of therapy till 21 days.

Results: In the epidural group, 5 (10%) and 22 (44%) of patients got pain relief on the first and second day of post therapy periods respectively with median value of 2 days±7.8SD while in calcitonin group 16%(n=12), 12%(n=6) and 18%(n=9) of patients got pain relieved on 12, 13 and 14 days of the initiation of intranasal therapy respectively with median value of 15 days±3.7SD.

C**onclusion:** Epidural methylprednisolone gives better and faster pain relief as early as the first post injection day with a median value of 2 days against 15 days in cases of nasal calcitonin spray. Early onset of pain relief was significant among younger age group, lesser duration of back pain and lower grades of osteoporosis.

Keywords: Osteoporosis, back pain, calcitonin, epidural steroid, visual analoque scale(VAS).

O19

Cervical spondylosis – a soft target

Pramanik R

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Introduction: It's really a common practice to victimize CS as a cause of vertigo in this part of India. This presentation is a sincere and humble effort to emphasize the role of clinical judgments diagnostic skills or aptitude in the field of rehabilitation Medicine.

Methods: This is a presentation based on the observations in OPD of Department of PMR in IPGMER, Kolkata from July 2009 to October 2012. This is a case series of so called cervical spondylosis presented to Department of PMR for rehabilitation.

Results: According to my experience in one of the apical hospital in a big state of India cervical spondylosis is frequently picked up as a cause of vertigo and dizzy spells without performing a Dix Hal pike test. This case series are consisting of cases of vertigo due to amurosis fugax, aortic stenosis, atrial fibrillation etc. which were actually referred to Department of PMR as cervical spondylosis. Even the patient with Pan Coast tumor has been refereed as a case of radiculopathy of cervical spondylosis.

Discussion: Caries spine is really common cause of any part of spinal pain. This presentation is consisting of few atypical presentation of tubercular infection of spine leading to spinal pain mimicking CS. Sometimes it becomes very difficult to pick up exact causes of neck pain or radicular pain or vertigo or dizzy spells. Clinical skills and aptitude can only save cervical spondylosis as soft target of the above chief complains.

Potential implications: This case series are pointing towards lack of expertise and thorough examination and investigation for the cause of vertigo and neck pain in this part of the world.

O20

Treatment of congenital clubfoot–a challenge for rehabilitation

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Objective of Study: About 1 in every 1000 children is born with clubfoot worldwide. Children having club foot are often abandoned or face a future in poverty. By correcting their feet, they get the opportunity to live a normal life. Surgeons report that Clubfeet treated by surgical methods become weak, stiff and are often painful in adult life. The Ponseti method is a very effective and relatively inexpensive treatment with good long term results. In this study I have tried to evaluate the effectiveness of Ponseti method in physiatrist practice.

Material & Methods: 18 patients having 29 club feet (11 B/L & 7 U/L) were treated as Out patients from January 2010 to june 2012 at Physical Medicine & Rehabilitation Department of SVNIRTAR, Cuttack. All feet are evaluated by pirani scoring and follow the ponseti method of treatment.

Results: Six unilateral feet had corrected fully as measured by pirani scoring and podogram. Two feet remain resistance for which the child sends for surgical correction. One unilateral case lost the follow-up.Twenty six feet got corrected fully till now without any complications.

Conclusion: It shows 92 % good result by using ponseti method of plaster technique. Ponseti method of manipulation and plaster casting is a good standard for correction of club foot deformity in early stage in the rehabilitation practice.

Keyword: Club foot, Pirani scoring, ponseti method

O21

Interventional Physiatry – Calicut Experience

Sobeekrishna G S

O22

Can musculoskelital USG replace NCS in management of CTS?

Kataruka Mohit[1], Pramanik R[2], Halder R N[3]

[1]MD PGT, [2]Assist Prof, [3]Prof & HOD,
Dept of PMR, IPGMER, Kolkata

Introduction: USG has several advantages like easy availability, short procedure time, non invasive, can localize or understand better pathological lesion causing entrapment, short waiting time etc. Over the years NCS has been used to diagnose and monitor the patients with carpal tunnel syndrome (CTS). But USG can fairly pick up the carpal tunnel as per the literature. This study has been done to find out the diagnostic accuracy of USG.

Aims & Objectives:

1.To find out accuracy of USG as diagnostic tool in CTS
2. To compare the efficacy of USG with standard NCS in CTS

Study design: Prospective cross sectional analytical study.

Study population: Patients attending PM&R OPD, IPGME&R, with suspected CTS

Study place: Dept. of PM&R, IPGME&R, Kolkata.

Duration : 6 months (from 1st March, 2012 to 31st August 2012)

Sample size: 36

Inclusion criteria:

1. Patient with clinical diagnosis of CTS
2. Patient who give consent
3. Age 18 years
4. Both sex

Exclusion criteria:

1. Patient with clinical diagnosis of CTS
2. Patient who did not give consent
3. Age 18 years

Methodology: After getting institutional ethical committee clearance, all patients who fulfil the above criteria are included in the study & further diagnostic conformation done by the standard diagnostic criteria of NCS. The same group of patient have been also screened for radiological entrapment criteria for CTS.

Results: At the end of the study, the data were analysed by statistical tools shows that

1. Musculoskeletal USG has sensitivity of 92.3 with 95% CI of 74.9 to 99.1 and specificity of 70.0 with 95% CI of 34.8 to 93.3
2. Predictive value of +ve test is 88.9% with 95% CI of 70.8 – 97.7 and Predictive value of –ve test is 77.8% with 95% CI of 40 – 97.2.
3. Kappa study shows value of 0.64(0.36 – 0.93)

Conclusion:

1. Musculoskeletal USG is a good diagonostic tool for diagonosis of CTS
2. Musculoskeletal USG cannot be considered conclusive investigation for CTS as kappa study value is <0.7
3. Musculoskeletal USG can not replace NCS in diagnosis of CTS.

O23

Study to evaluate efficacy of local steroid injection in treatment of carpal tunnel syndrome with respect to subjective and objective clinical findings, electro physiologic and ultrasonographic parameters

Ali Junis

Objective: To Evaluate efficacy of local steroid injection in treatment of carpal tunnel syndrome with respect to subjective and objective clinical findings, electro physiologic and ultrasonographic parameters.

Methods: A prospective follow up study was conducted on 44 consecutive patients with 73 hands with symptomatic carpal tunnel syndrome (CTS) confirmed by ultrasonographically and electro physiologically. Patients were followed up for 3 months after steroid injection. Outcome measures were evaluated by improvement in VAS scale, Modified Boston Carpal Tunnel Questionnaire symptom and function scores, Electrophysiological and Ultrasonograhic parameters.

Results: After steroid injection significant improvement of pain was seen as measured with Visual analogue scale ($p < 0.001$). Statistically significant improvement were seen in grip strength, MBCTQ (Modified Boston Carpal Tunnel Questionnaire) symptom score and MBCTQ function score from baseline to 3 month follow-up ($P < 0.001$). Significant improvements were also noted in nerve conduction studies in sensory distal latency (SDL), mean distal latency (MDL), sensory nerve action potential (SNAP). We observed statistically significant reduction in cross sectional area of median nerve after 3 months follow up by ultrasound.

Conclusion: Local steroid injection is a simple, safe and cost effective intervention in treatment of CTS. Local steroid injection provides rapid relief of symptoms and improvement of physical function, neurophysiologic and ultrasonographic parameters.

O24

Study of effectiveness of gravity lumbar reduction therapy (GLRT) program in the treatment of symptomatic lumbar prolapse intervertebral disc (PIVD)

Rai Bijendra, Naorem Bimol, Singh Y Nandabir, Wangjam K

Aim: To study the effectiveness of gravity lumbar reduction therapy program in the treatment of symptomatic lumbar prolapse intervertebral disc.

Study design: Randomized control trial

Setting: Department of PMR, RIMS, Imphal

Participants: One hundred clinically diagnosed lumbar PIVD patients from September 2010 to March 2012

Intervention: Patients were randomly divided into intervention (A) and control (B) groups. Group A (53 patients) underwent GLRT from 45º with daily increments of 5º till 70º–90º was achieved. Group B (47 patients) received 3 doses of 80 mg methylprednisolone through intra-laminar epidural injection (ESI) at intervals of 1 week at the site of prolapse. Assessments were made at baseline, weekly for 3 weeks, then at 3rd and 6th months.

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Conclusion: GLRT program is effective and safe in the treatment of symptomatic lumbar PIVD.

Keywords: Gravity lumbar reduction therapy, intra-laminar epidural injection, Oswestry Disability Index

O25

Comparative efficacy of platelet rich plasma injection, corticosteroid injection and ultrasonic therapy in the treatment of periarthritis shoulder

Singh Neha, Kothari S Y, Srikumar V

Objectives: To compare the effectiveness of Platelet rich plasma injection, Corticosteroid injection and Ultrasonic therapy in the treatment of Periarthritis shoulder in terms of decrease in pain, improvement in limitation of range of motion and functional improvement.

Study place: Dept. of PM&R, IPGME&R, Kolkata.

Duration : 6 months (from 1st March, 2012 to 31st August 2012)

Sample size: 36

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Objectives: To compare the effectiveness of Platelet rich plasma injection, Corticosteroid injection and Ultrasonic therapy in the treatment of Periarthritis shoulder in terms of decrease in pain, improvement in limitation of range of motion and functional improvement.

Design: Prospective, randomized, case-control study.

Setting: Tertiary care and teaching hospital.

Participants: 180 patients of both the sexes in age group of more than 18 years satisfying the inclusion and exclusion criteria were randomized into three groups.

Intervention: Patients in group A were given one injection of PRP by anterior approach with home exercise therapy. Patients in group B were given one 2 ml injection of Corticosteroid injection by anterior approach with home exercise therapy. Patients in group C were given Ultrasonic Therapy for 7 minutes for 7 sittings with home exercise therapy.

Outcome measures: Patients were assessed in terms of improvement in Range of Motion, VAS, SPADI and DASH scores. The indices were measured at 0 weeks (pre-treatment); 3 weeks, 6 weeks, 12 weeks (follow-up).

Results and outcomes: The statistical analysis of the study shall be done and the results will be presented at the conference.

O26

Effect of suprascapular nerve block with lignocaine under USG guidance in periarthritic shoulder on pain & range of motion

Simmi

Objective of the study: The effect of suprascapular nerve block with lignocaine under USG guidance in periarthritic shoulder on pain & range of motion.

Method used: Patients with idiopathic periarthritis shoulder attending PMR OPD from 1/November/2011 to 31/August/ 2012 were assessed for pain and restriction of range of motion with standard scales (goniometry and visual analog scale). These were measured subsequently on weekly basis for 1month,then,once in 2 weeks for second month.The results were analyzed and discussed.

Results : Three major groups of patients were those with - Rotator cuff disease, Stroke and Idiopathic. Earlier illnesses responded satisfactorily to SSNB, while late patients showed lesser response. Evenin the latter group the favorable response was statistically significant.

Conclusion: SSNB under US guidance is a good interventional option in periarthritis shoulder.

O27

Hydrodilation in adhesive capsulitis of shoulder

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[2]2nd Year DMRD-PGT, IPGMR & SSKM Hospital Kolkata-20.
[3]MD (AIIMS), DNB, MNAMS, Sr. consultant, SNP Hospital Kolkata-20.
[4]MD (PMR), Consultant, SNP Hospital Kolkata-20

Study Design: Prospective study

Objective: To study the efficacy of USG guided hydrodilation in case of adhesive capsulitis of shoulder.

Materials and Methods: 22 patients with adhesive capsulitis of the shoulder, not responded to 3 months conservative treatment (SPADI<10) were recruited for study after taking informed consent from patient. Patients were divided in to 2 groups. First group were treated with USG guided hydrodilation (by Normal saline & Bupivacaine) and followed by physical therapy and second group with physical therapy only. We were prospectively followed-up and clinically assessed at 2, 6 &12weeks. SPADI, disability index, pain index and passive ROM were used as outcome measures.

Result: Hydrodilation produces faster resolution of pain and disability than physical therapy only.

Conclusion: From this study it is concluded that hydrodilation with physical therapy produce fast recovery in adhesive capsulitis of the shoulder as compared to physical therapy only. From this small study, hydrodilation is proved as a safe and effective treatment option for refractory case of adhesive capsulitis.

Keywords: Physical therapy, Hydrodilation.

O28

Non surgical management of rotator cuff tear

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Rotator Cuff tears are amongst the most common pathological condition affecting the shoulder. Supraspinatus tendon is most frequently torn. Rotator cuff tears increase in incidence with age and less frequently they occur due to trauma. Sudden trauma or chronic overuse with repetitive overhead motion with internal or external rotation is probably mechanism of injury. A study was conducted in Sambhunath Pandit hospital and SSKM hospital Kolkata in the department of Physical Medicine and Rehabilitation (PMR) from March 2010 to august 2011. Two sample groups were selected, each having thirty seven subjects. The study was undertaken to evaluate the efficacy of nonsurgical rehabilitative management in rotator cuff tear. Also we have evaluated the effect of therapeutic exercise versus therapeutic exercise and ultrasound therapy. Rehabilitation in rotator cuff tear is aimed at managing impairment and minimizing disability. As a physiatrist, we have tried to provide a cost effective non surgical physiatric management so that residual disability is minimized and quality of life is improved. Regarding the incidence, bilateral involvement is more common. Also equal incidence is noted in both sexes .Housewives are affected most commonly but farmers, carpenters and manual labours are also significantly affected.

Keywords: Rotator cufftear, Supraspinatus tendon, Physiatric management, Ultrsound therapy(UST), Therapeutic exercise, Quality of life (QOL).

O29

Prolotherapy versus corticosteroid injections for the treatment of plantar fasciitis: a randomized controlled trial

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Chronic plantar fasciitis is a degenerative tissue condition and one of the mostcommon causes of foot pain requiring professional care among adults. In this study we have compared improvement in pain and foot function in patients withchronic plantar fasciitis following P2G (prolotherapy) versus Triamcinolone acetonide injections.