

The results will be analysed using the values of *Mean, Median and Standard Deviation (Quantitative variables)* & using *proportion (Qualitative variables)*. 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 injection 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 Resonance Imaging Score) criteria assessed at baseline (day 0) and at the end of trial (180 days).

Result: Mean WOMAC score improved from 97.67 ± 21.37 at baseline to 61.03 ± 24.79 at 6 months ($p=0.0001$). The mean WORMS **Scartilage score** in MFTJ (medial femoro-tibial joint), LFTJ (lateral femoro-tibial joint) and PFJ (patella-femoral joint) remain close to baseline. But, mean WORMS **Sbone marrow edema** and **bone cyst scores** 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.

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 enrolled and divided into intervention 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 parameter* the mean reduction of pain in standing/ walking, bending and ascending/ descending at WOMAC scale was significantly higher in intervention group. Also the mean reduction in the need for NSAIDS was

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

Conclusion: The lateral 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 reduce 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

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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 certainty 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 from 0-4.

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.