

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.

**Results:** Postural stability training in balance system has shown statistically 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

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**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

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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 many patients difficult. It has been suggested that mirror therapy is a simple, inexpensive and, most importantly