

Abstract of National Mid Term CME 2011, Kolkata

Review of result of reconstructive surgeries in claw hand in leprosy cured patient

Vinod Prasad,

Assistant Professor, PMR Department, Patna Medical College

OBJECTIVE: Leprosy, though claimed to be cured, is yet prevalent in some parts of country, especially Bihar, Jharkhand. Cases do come with deformities of hands and feet, though leprosy disease itself cured. To improve functional result and lead a socially integrated and respectable life, we operated such cases of claw hand deformities.

MATERIALS & METHODS: We select the cases reporting to PMR OPD Deptt. Patna Medical College & hospital. Cases were referred from Primary Health Centre, District Hospitals and Skin department. We selected only those cases who have taken full course of MDT and who were otherwise fit for tendon transfer.

After a good period of pre-operative exercise to strengthen F.D.S of middle/ ring fingers, we operated generally under regional anaesthesia and esmarch tourniquet. We transferred flexor digitorum sublimis of middle finger to flexor pulleys of all the four fingers for claw hand. For opponensplasty, we transferred FDS of ring finger to exert effect of abduction and opposition. Postoperatively the hand was immobilised in P.O.P cast for three weeks. After that stiches removed, exercise started and fingers were kept in cylinder cast for further 2-3 weeks.

RESULTS: In most case unilateral upper limb was involved (78%). Least no (2.6%) was involved of both upper and lower limb. In upper limb, total claw i.e.(affection of ulnar and median nerves) was 7.6%. Postoperatively at the end of 24 months result were good (35%), workable (32%), excellent (12.6%), and poor (11.3%). Criteria were as suggested by DIFT. Commonest complication was flexion of PIP joint of finger. For this we used finger cylinder cast/ orthoses for longer period.

CONCLUSION: These neglected patients of post-Hansen's claw hand deformity certainly need care at tertiary treatment level. Apart from cosmetic look, ADL activities and functional gain has been achieved markedly. This helps patient attend and participated in various social activities.

Management of a case of spinal cord injury with flexor spasm and spasticity: what is appropriate technology?

*K Wangjam**

Introduction: Spinal cord injury is associated with various forms of hypertonia, including flexor spasm and spasticity. Hypertonia has to be treated if it interferes with the treatment programme, function or causes complications. Out of several methods of intervention, it is important to decide what is the most appropriate for a case.

Case: Fifteen years old male who suffered from # dislocation of C5 over C6 with incomplete C5 tetraplegia following injury due to fall from height on 18.10.10 is presented to illustrate the problem. He belonged to rural background and low economic status.

He was treated elsewhere before attending PMR on 10.01.11. He had severe spasticity and flexor spasm affecting both lower limbs (grade III to IV). In addition to the above, he had 3 major maltreatment related problems: (i) Grade VI sacral and left trochanteric sore. (ii) Penoscrotal fistula. (iii) Effects of decompensation.

Results: Oral baclofen was tried for 3 weeks with incremental doses from 15 mg daily to 45 mg daily in divided doses. On the failure of this pharmacological intervention, injection phenol aqueous solution for motor point block and nerve block was performed on several sessions for different muscles and nerves. Video to record the change from pre-injection grade IV to grade I postinjection will demonstrate the effect. A new technique of injection of iliopsoas will be shown.

Discussion: Surgical intervention options are selective dorsal rhizotomy (SDR), peripheral orthopaldic procedures, like single event multiple level (SEML) type of surgery or/and neurectomies were not considered as the neurological status was evolving. Current status of these procedures reviewed.

Interventions which have temporary or reversible effect will be most suited for the case. Of which, intrathecal baclofen (ITB) would have been most appropriate. Cost

Abstract

and high-end technology is out of reach for a patient like him. Other alternative would have been low-end technology product like multiple sites Botox injection would have served as the second best. But the cost is absolutely forbidding. Recent status of these procedures will be given.

Conclusion: Selection of method of reducing hypertonia in SCI is not enough; most important is the appropriate technology for a case.

* Professor & Head, PMR.
RIMS, Imphal

Integrated and challenging rehabilitation improves span and quality of life in SCI

M M Ghatak

*(Founder & In-charge Medical Rehab Center,
Kolkata)*

Rehab not only improves quality of life, but also gives years to the life in SCI. Among 526 cases of SCI patients, rehabilitated as indoor basis (2 months to 14 months stay) in medical rehab centre, Kolkata a classical case report is given here.

Mr. X, a case of D12 # with complete paraplegia, after pedicle screw fixation was admitted for rehab with very poor GC, emaciated stature, blackish and shrunken eyes, severe UTI and fever, catheterised bladder, big sacral stage III pressure sore, poor nutritional background, constipated bowel and complete motor and sensory loss below the level of injury. The entire ailment compounded with mental depression.

Rehab started with tackling the severe medical illness. Medical experts, PMR and subspecialties (PT, OT, psychotherapist, nutritionist) were involved. Superspeciality teams consisted of pressure sore team (plastic surgeon, dressor attendant, sister and nutritionist), physical rehab team (PMR, PT, OT, orthotist), Psycho Rehab team (PMR, psychotherapist, psychiatrist,

attendant, sister), uro rehab team (urologist, RMO, sister, PMR), ortho team (orthopaedician, RMO, PMR, dressure) started working

He passed through series of problems as - H.O left hip – surgically removed for functional sitting, bedsore after recognisable healing – flap and skin grafting done, mild DVT – treated with LMWX and warfarin which induced increase PT and INR and bleeding, managed with FFP and conservatives. Mental depression led him to attempting suicide and psycho rehab and medicine actively dealt the situation, after urodynamics study CIC started and practised successfully, muscular bulk and physical strength and fitness came after control of all medical events and monitoring the nutrition scientifically and eventually. Wheelchair training, transfer techniques etc trained, home modification guidelines and vocational assessment and guidelines supplied to the patient A 13 months challenging rehab management successfully sent the patient at home.

PMR, the team leader, in true sense the doner of a bright positive life with increasing survival of a patient, gains positive scientific satisfaction than any other speciality and PMR speciality would find their knowledge not stuck and struggled by the encroachment of other specialists.

Closed phenol neurolysis and tibial neurectomy for gastrosoleus spasticity reduction and improvement of ambulation – a cohort study

Javed Anees, T K Vasudevan**, S Abdul Gafoor****

Objective:- To compare the effects of closed phenol neurolysis and tibial neurectomy in decreasing spasticity and improving ambulation in patients with spastic equinus.

Design:- Cohort study

Setting:- Inpatients admitted in PM&R department, Calicut Medical College, Kerala.

Abstract

Study period: From January 1 to July 31.

Method: - Patients with spasticity grade 2 and more were treated with peripheral nerve phenol block after nerve localisation with stimulator and posterior tibial neurectomy. Evaluation included clinical assessment scale of spasticity (modified Ashworth scale – MAS), FIM scale for transfer, Walking index for SCI.

Scoring of MAS and FIM, WISCI done 1 week, 3 weeks and 6 weeks, 12 weeks after interventions.

Results: - Both groups showed significant reduction in spasticity and improvement in ambulation; more reduction of spasticity was observed with tibial neurotomy. Final results await the completion of study period.

Conclusion: - Current trend shows more favourable result in reduction of spasticity of tibial neurotomy and final results are being awaited.

*Junior Resident

**Assistant Professor

***Professor and HOD- Department of PM&R, Calicut Medical College

A study of effects of home based exercise therapy on spinal mobility, fatigue, quality of life, disease activity and functional capacity in patients suffering from ankylosing spondylitis

Prajna Ranjani M, Sanjay Wadhwa, U Singh, Uma Kumar, R M Pandey***

Objective: To study the effects of home based exercise therapy on spinal mobility, functional capacity, daily activity, level of disease activity, extent of sense of well being, quality of life, fatigue, in patients of ankylosing spondylitis.

Material and Method : A prospective study conducted at PMR department, AIIMS, on 33 consenting patients of Ankylosing spondylitis, who fulfilled Modified New York criteria which included 31 males, 2 females, aged

between 16 and 65 years. NAAS set of exercises along with deep breathing exercise was given for a period of 3 months. Compliance chart and tablet count chart were given to the patients. Patients were followed up every 6 weeks. Bath ankylosing spondylitis disease activity index (BASDAI), bath ankylosing spondylitis functional index (BASFI), bath ankylosing spondylitis metrology index (BASMI), bath ankylosing spondylitis global index (BAS-G), multidimensional assessment of fatigue (MAF), Ankylosing spondylitis quality of life (ASQoL) scales were administered to measure disease activity, functional status, spinal mobility, sense of well being, fatigue levels and quality of life in patients before and after exercise therapy.

Results : Statistically significant changes in median value of following parameters were obtained, BASDAI from 4.9 to 3.3 ($p < 0.0007$), BASFI 4.4 to 3.4 ($p < 0.004$), BASG 6 to 4.5 ($p < 0.0005$), MAF 65.5 to 50 ($p < 0.0004$), ASQoL 12 to 8 ($p < 0.0088$) and no change in BASMI ($p < 0.0813$).

Conclusion : Home based exercise therapy improved the sense of well being, quality of life, fatigue levels, and improvement in activities of daily living and reduce disease activity in patients with Ankylosing Spondylitis under study. Not much change in spinal mobility was found.

Department of Physical Medicine and Rehabilitation (P.M.R), AIIMS

*Additional Professor, Dept. of Medicine (Rheumatology Unit), AIIMS

** Professor & Head, Dept of Biostatistics, AIIMS

Assessment of total contact casting in diabetic neuropathic foot ulcers

A Basak, T Ahmed, S Mishra, P P Das, A Palit, R N Haldar

OBJECTIVE : To determine the outcome of diabetic neuropathic foot ulcers treated with total contact casting (TCC) in terms of duration to heal and percentage of ulcers healed based on improvement of Wagner's grading.

Abstract

STUDY DESIGN : Prospective Clinical Trial.

SAMPLE SIZE : 30 patients.

PLACE OF STUDY : Department of Physical Medicine & Rehabilitation,IPGME & R,SSKM Hospital,Kolkata.

DURATION OF STUDY :6 months.

INCLUSION CRITERIA : Diabetic neuropathic foot ulcers upto grade 2 of Wagner's classification treated with local dressing, antibiotic, orthosis but with no improvement.

EXCLUSION CRITERIA :

- (1) Patients unwilling to give consent.
- (2) Active or acute deep infection, sepsis or gangrene.
- (3) Patients unable to comply with follow-up visits or wearing precautions.

MATERIALS AND METHODS :

After selection of the patients based on inclusion and exclusion criteria,ulcers were debrided off under aseptic condition and total contact casting was applied.Total contact casting was removed weekly and was done again if necessary for the maximum period of 6 weeks or till healing.Cases were labelled as cast failure when there was no improvement of Wagner's grading in 6 weeks.Main outcome measures were duration to heal and improvement of Wagner's grading.

RESULTS : Twenty patients were males and 10 patients were females; 90% patients (27 patients) responded to total contact casting in 6 weeks which was statistically significant ($p < 0.05$); 10% cases(3 patients) were labelled as cast failure.Among 27 responders, in 20 patients (74.07%) ulcers took an average of 4 weeks to heal completely.In 14.81% patients ulcers healed completely in 6 weeks and in 11.11% patients ulcers healed completely in 2 weeks.Among the responders 66.66% patients had ulcers in forefoot, 22.22% patients had ulcers in midfoot and 11.11% patients had ulcers in hindfoot. Among the cast failure cases 66.66% patients had ulcers in hindfoot.

DISCUSSION :A study on the similar topic has been found in the following reference – J.Coll Physicians Sur Pak. 2008 Nov;18(11):695-8.They found total contact casting as an effective treatment modality for diabetic neuropathic foot ulcers.

CONCLUSION : Total contact casting is an effective treatment modality for neuropathic diabetic foot ulcers with Wagner's grade up to 2.

Effect of phenol neurolysis in the treatment of spasticity:a Calicut experience

Pradeep Kumar Kalathil, T K Vasudevan**, S Abdul Gafoor****

Objective: To assess the decrease in spasticity after phenol neurolysis.

Design: Before – after trial with 6 months follow-up.

Setting: Out patients and in patients attending PMR department at Calicut Medical college, Kerala from January1 to June 30, 2011.

Materials and Methods: Patients with spasticity grade 2 and more were treated with peripheral nerve phenol block after nerve localisation with nerve stimulator. Evaluation included clinical assessment of spasticity (Ashworth Scale) and FIM scoring after 1 week, 3 weeks, and 6 weeks and thereafter monthly.

Results: Spasticity decreased after neurolysis . Significant functional improvement was also noted.

Conclusion: Phenol neurolysis is a useful and cost effective treatment for spasticity.

*Junior Resident

**Assistant Professor

***Professor and HOD- Department of PM&R, Calicut Medical College

Abstract

Comperative study between the efficacy of facet joint block and ultrasound therapy in L4/L5 facet arthropathy

T Ahmed, A Basak, A Banerjee, S Iswarari, R Pramanik, P Das

STUDY DESIGN: Prospective randomised control study

STUDY PLACE: NRSMC & SSKM, IPGMER

INCUSION CRITERIA:

- (i) L4/L5 Facet arthropathy who failed 2 weeks conservative treatment
- (ii) Clinical symptoms and signs of facet arthropathy

EXCLUSION CRITERIA :

- (i) Structural congenital vertebral anomalies
- (ii) Associated PIVD/ spondylolisthesis
- (iii) Spondylo-arthropathy
- (iv) Unable to give consent
- (v) Bleeding diatheses

- (vi) Contra-indication of facet joint block/ UST

SAMPLE SIZE : 60 patients

MATERIALS and METHODS : Patients with facet arthropathy of L4/ L5 attended in PMR OPD of NRSMCH & SSKM IPGMER who already received 2 weeks of conservative treatment with orthoses, NSAID and exercise. Patients were divided randomly into 2 groups after taking consent from patients. Group A received facet joint block and group B received a course of UST. Follow-up were done on 0, 3 weeks, 6 weeks.

ASSESSMENT CRITERIA: VAS, OSWESTRY INDEX (pain, disability)

RESULT ANALYSIS: Using SPSS software

DISCUSSION: Comparison of the reduction of pain and disability between the conservative treatment and the facet joint block group showed that there is statistically significant improvement (p value < 0.05) in those patients treated with facet joint block. UST showed improvement without statistical significance.

CONCLUSION: Facet joint block is definitely helpful in treatment of L4/L5 facet arthropathy.

KEY WORDS: Facet joint arthropathy, UST, Facet joint injection.

*Abstract***Comparison of anterior and posterior ankle foot orthoses in foot drop patients by metabolic analysis**

Harleen Uppal, Gita Handa, U Singh, S Wadhwa,
S L Yadav, R M Pandey*

OBJECTIVE: This is a preliminary study being conducted to investigate the changes and compare them in terms of metabolic equivalent, VO_2 , VCO_2 and gait patterns in foot drop patients with anterior and posterior ankle foot orthoses.

STUDY DESIGN: The subject group comprises 20 unilateral foot drop patients who can walk independently or with a cane, after obtaining clearance from the Ethics Committee. Only patients with a spasticity score of <2 as per the Modified Ashworth Scale are being included in the study. A cross-over study is being conducted. Metabolic analysis and gait analysis of the patients is carried out while wearing anterior and posterior ankle foot orthoses separately using START 2000M portable metabolic analyser system and the Zebris Gait Analysis System respectively. The study also includes a subjective questionnaire after 1 month to ask the patient's preference. The entire study is being conducted in the out patient

department of Physical Medicine and Rehabilitation, All India Institute of Medical Sciences.

RESULTS: In 8 patients till now we have seen a decrease in metabolic equivalent in patients wearing anterior ankle foot orthosis as compared to posterior ankle foot orthosis while there were no significant changes in gait analysis between the two.

CONCLUSION: The study concluded that wearing anterior ankle foot orthosis was better metabolically than posterior ankle foot orthosis.

*Department of Physical Medicine and Rehabilitation, All India Institute of Medical Sciences. Department of Biostatistics, All India Institute of Medical Sciences

Burden and stress in care-givers of children with cerebral palsy

Ramita Sardana, S L Yadav, U Singh, Sanjay
Wadhwa, Gita Handa, Manju Mehta*,
R M Pandey**

Study Design : Descriptive study.

Objective : The purpose of this descriptive research was to examine caregiver burden and to investigate the predicting power of caregiver's age, family income, caregiver's health status etc. on stress and burden of care-

**INDIAN ASSOCIATION OF
PHYSICAL MEDICINE & REHABILITATION
MUMBAI BRANCH**

EXECUTIVE COUNCIL - 2011 - 2013

**President: Dr B D Athani
Secretary: Dr Anil Kr Gaur**

Abstract

givers of children with cerebral palsy.

Material and method : The study sample consisted of 65 primary care-givers of children with cerebral palsy aged 6 months to 10 years. Two scales were used, DAS scale and care-giver burden scale. Data were collected by questionnaires. Descriptive statistics and multiple regression were used for data analysis.

Results : The results revealed that emotional burden on care-givers of children with cerebral palsy was moderate, financial burden was low and physical and social burden were low to moderate.

Conclusion: From this study it is concluded that care -givers of children with cerebral palsy experience burden and stress. These findings suggest that doctors should provide intervention to increase the care-giver's skill in providing care and coping, enhance support networks and encourage and promote the health and well being of care-givers, so that care-givers can effectively and efficiently care for their children with cerebral palsy.

Department of PMR, AIIMS, New Delhi.

*Department of Psychiatry, AIIMS, New Delhi.

** Department of Biostatistics, AIIMS, New Delhi.

A study of effects of intervention of botulinum toxin A on lower limb in children with spastic cerebral palsy

Raj Kumar, S Wadhwa, U Singh, S L Yadav

STUDY DESIGN : Prospective study

OBJECTIVE : Analysis of clinical gait pattern, change in spasticity and range of motion cerebral palsy patient with spastic lower limb muscle after injecting botulinum toxin- A.

MATERIAL AND METHODS : 28 children (18 males and 10 females) with spastic CP had problems in normal walking, aged 2–9 years (mean age 4.6 years), consecutively treated in the PMR department over a 20-month period, were prospectively followed-up and clinically assessed pre- and post-treatment (at 2 weeks and 2 months) both objectively and subjectively. Objective parameter included gait parameters – Stride length, cadence, velocity, step length, base of support; active range of motion (ROM), Passive ROM (measured by goniometry) and grading of muscle spasticity on Modified Ashworth scale. Subjective assessment were questionnaire in terms of comfort, ease of care, perineal hygiene,

INDIAN ASSOCIATION OF PHYSICAL MEDICINE & REHABILITATION TAMILNADU BRANCH

EXECUTIVE COUNCIL - 2011 - 2013

President : Dr. R. Chinnathurai
Secretary : Dr. Thiyagarajan
Treasurer : Dr. P. Thirunuvukkuarasu

Abstract

walking. Injections were performed using clinical palpatory method on OPD basis. All patients received BTX-A injections, followed with physical and occupational therapy and orthosis as needed.

RESULTS : Significant improvement was achieved for spasticity reduction in gastrocnemius ($p < 0.001$), hamstring and adductor ($p = 0.050$), ankle AROM and PROM ($p < 0.001$), active knee extension ($p = 0.009$), popliteal angle ($p = 0.015$) and % left and right foot contact ($p < 0.001$), whereas non-significant change observed in step length, cadence, velocity, stride length and base of support. Parents felt subjective improvement in $>90\%$ of cases.

CONCLUSION : Botulinum toxin- A injection of the lower limb muscles is established as effective in the treatment of spastic equinus/crouching/scissoring in patients with cerebral palsy. The treatment was feasible and easily implemented. Botulinum toxin- A injections were well tolerated, yielded no serious treatment-related adverse events.

Pachydermadactyly

Sumalatha K B, Dheeraj A, U Singh

A 23-year male, student from Delhi, presented with swelling of small joints of both hands for 3 years. There was no history of pain, fever, early morning stiffness, restriction of joint range of motion, difficulty with activities of daily living. There was no history of similar complaints in the past. On examination, there was no erythema, increased temperature, or tenderness. Swelling was soft in consistency and there was no restriction of joint range of motion. His lab investigations including complete haemogram and RF were within normal limits. B/L hand x-rays showed only soft tissue swelling around PIP joints of medial four fingers. There was no joint space reduction, erosions or peri-articular osteopenia. He had been treated with DMARDs and steroids (for short duration) previously with no improvement or worsening of symptoms. These features are consistent with diagnosis of pachydermadactyly, which is a rare

distinct form of fibromatosis characterised by dense fibrosis and fibroblastic proliferation around one or more proximal interphalangeal joints. It usually affects the medial, lateral and dorsal aspects of proximal interphalangeal joints of digits II-V. It is a benign condition that mimics rheumatological disorders like rheumatoid arthritis, psoriatic arthritis, etc. We present a case report of pachydermadactyly and comment on the available literature as a benign condition like this should not be overly treated.

Department of PMR, AIIMS, New Delhi
Dept of PMR, AIIMS, New Delhi

A comparative study of efficacy of intra-articular injections of a single dose high molecular weight hyaluronic acid (HMW HA) versus 3 doses of mid molecular weight hyaluronic acid (MMW HA) in OA knee

A Banerjee, T Ahmed, P P Das, R Pramanik, P Das, A Palit

Objective : This comparative study investigated the efficacy of intraarticular injections of a single dose HMW HA versus 3 doses of MMW HA on knee osteo-arthritis (OA).

Study Design : Prospective randomized experimental study.

Study Place : OPD of Deptt. of PM&R, IPGME&R, Kolkata.

Study Duration : 3 months.

Study Sample : 40 patients. In each group twenty subjects with OA knee were injected with high and mid molecular weigh HA.

Methodology :

Inclusion criteria:

- 1) All patients with primary osteo-arthritis knee.

Abstract

- 2) Grade two or grade three osteo-arthritis knee.

Exclusion criteria:

- 1) All patients with secondary osteo-arthritis knee.
- 2) Grade one or grade four osteo-arthritis knee.
- 3) Patients with gross ligamental instability.
- 4) Patients with contraindications of intra-articular injections i.e. overlying soft tissue sepsis, bacteremia, anatomic inaccessibility, an uncooperative patient, articular instability, uncontrolled bleeding diathesis, etc.
- 5) Patients with contraindications of intra-articular HMW HA i.e. allergy to a visco-supplementation solution.

Assessment Criteria :

- 1) Pain & functional status components of the Western Ontario and McMaster Universities (WOMAC) scale,
- 2) VAS score and
- 3) 50 feet walktime

These were measured at baseline, 3 and 6 weeks post intervention.

Result Analysis: Significant improvement was found in patients who were treated with HMW HA injections ($p < 0.05$). However, for the group which was treated with MMW HA, the improvement was not significant as the results yielded $p > 0.05$.

Conclusion : The results of the study indicated that the group treated with HMW HA showed better results compared to the group treated with MMW HA.