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#### ABSTRACTS FROM THE 7TH ANNUAL NEUROLOGY RESEARCH DAY, SHIFA INTERNATIONAL HOSPITAL, ISLAMABAD

#### PREDICTING AMBULATION IN CHILDREN WITH CEREBRAL PALSY

Dr. Syed Hussain Shah, Dr.Noreen Akhtar, Dr. Akhtar Waheed, Dr. Nida Fatima

Armed Forces Institute of Rehabilitation Medicine, Rawalpindi.

**Objectives:**To identify factors predicting ambulation in children with cerebral palsy.

Materials and Methods: It's a cross sectional study conducted at CP clinic of Armed Forces institute of Rehabilitation medicine Rawalpindi from Jan 2012 to Jan 2013. All cerebral palsy children above 2 years of age and both genders were included in study. SPSS version 17 was used for data analysis.

**Results:**Total 114 children with cerebral palsy were included in the study. 64% (73) were males and 36% (41) were females. Mean age of children were 53 months with standard deviation of 2.26. Independent walking without limitation was observed in 10.5 % (12) children, 26.3% (30) children walked with limitation and 17.5% (20) children walked with hand held mobility device. Ambulation was not achieved in 45.6% (52) children. Type of cerebral palsy was most important for predicting walking as 88% of hemiplegic , 65.9% of diplegic , 50% of Dyskinetic , 25% of quadriplegic and 11.1% of atonic cerebral palsy were able to walk.

There was significant association of ambulation with seizures, severe visual loss and hearing loss (p value less than 0.05). Conclusions: We concluded that large proportion of children with cerebral palsy didn't achieveindependent walking. Most important predicting factor for ambulation is type of cerebral palsy, seizures, visual and hearing loss.

#### THE RISK FACTORS, ETIOLOGY AND MANAGEMENT OF STROKE IN YOUNG ADULTS

Dr. Naveed Ahmed Shifa International Hospital, Islamabad.

**Objective:**To study the risk factors, etiology and management of stroke in young adults in a tertiary level hospital in Islamabad.

Methods: Retrospective study conducted at Shifa

International Hospital in Islamabad. 45 patients between eighteen and forty-five years with hemorrhagic and Ischemic stroke admitted over a five year period constituted the study population. The study was based on clinical spectrum, laboratory and radiological indices.

**Results:**Male constituted 60 % and female 40% of all cases of stroke.85% were having infarcts and 15% were having hemorrhage. Out of hemorrhagic patients 100 percent of them were having hypertension and bleed in Basal Ganglia .Out Of patients having ischemic stroke,25 % were diabetic, 20% due to dyslipidemia, 17 % were due to vasculitis,13% were due to cardio embolism,10 % were hypertensive, prothrombotic state constituted 10 %, 10 % due to homocystinuria and 6% had an idiopathic cause. Premature atherosclerosis of extra cranial carotid artery was 3 %.Follow up for more than three months was 17%.

**Conclusion:** The stroke in young has heterogeneity in its causation and must be investigated thoroughly and should be followed on long term basis in order to ensure compliance and prevent its recurrence.

COMPARISON OF EFFECT OF SUPRASCAPULARNERVE BLOCK VS. SUB ACROMIAL TRIAMCINOLONE ACETONIDE ON HEMIPLEGIC POST STROKE SHOULDER PAIN AND RANGE OF MOTION.

Dr. Muhammad Ali Raza

Armed Forces Institute of Rehabilitation Medicine, Rawalpindi.

**Objective/Aim:** This study established comparative efficacy of two injection technique in shoulder pain reduction and effect on ROM/ Numeric rating Scale (NRS) in stroke patients.

**Material and Methods:**20 patients recruited and were divided into two groups A and B, ten each. Baseline shoulder goniometry (flexion, abduction) done along with baseline NRS for pain. Group A patients received SSNB with 2 ml of 1 % Bupivacaine. Group B patients were injected 2ml of Sub acromial intraarticular 40 mg triamcinolone injection. At 4 weeks shoulder goniometry, passive goniometry and NRS scores were noted. Date was analyzed by IBM SPSS V19

**Results:**The mean age was  $58.54 \pm 12.30$  years.

Time since injury was  $7.60 \pm 11.32$  months. The NRS pain score before the procedure was  $7.2 \pm 1.2$ ; which turned to  $3.0 \pm 0.9$  at 4 weeks in group A. The NRS pain score was  $7.7\pm1.3$  which was  $5.0 \pm 0.5$  at 4 weeks in group B. The change in baseline ROM improved from an average of  $60^{\circ} \pm 28^{\circ}$  (flexion) and  $58^{\circ} \pm 28^{\circ}$  (abduction) to  $99^{\circ} \pm 46^{\circ}$  (flexion) and  $107^{\circ} \pm 39^{\circ}$  (abduction).for group A . in Group B (flexion) was  $50 \pm 25$  and (abduction)  $45 \pm 37$  to (flexion)  $85 \pm 41$  and (abduction)  $95\pm35$  at 04 weeks. There were important differences in repeated measures of pain intensity levels at these ROM values (P < 0.05). The comparative study was in favor of group A in terms of NRS and the ROM measurements (P<0.05).

**Conclusion:**SSNB with 1% of bupivacaine was more effective at 4 weeks in pain reduction andimprovement in ROM than sub acromial steroid injections for shoulder pain in stroke patients.

#### **CAREGIVER STRESS IN STROKE SURVIVORS**

Quratulain, Nayab Zaheer Dar, Dr. Saad Munzar, Dr. Abdul Wahab Yousafzai, Dr. Arsalan Ahmad. Shifa College of Medicine, Islamabad.

**Background:**A principal caregiver (CG) is directly affected by patient's health problems that lead to CG strain. Pakistan has an estimated 4.8% of the population suffering from strokes. Aim: The study attempts to evaluate the caregiver stress through stroke patients who have moderate to severe disabilities. It assesses the level of stress and the factors which make CGs more prone to stress.Out of a total of 112 stroke patients and their caregivers, 12 were exempted.

Materials and Methods: The severity of stress was rated using the Modified Caregiver Strain Index(MCSI). It is a 13 question tool that measures stress related to care provision. Participants were chosen on the basis of being directly involved in the care of patient andable to give consent for the study. Patients had to have a more than 1 month history of stroke and treated in a tertiary care hospital.

**Results:**Most of the CGs were between the ages 30-39 (48%) and male (70%). Out of the males, most were sons (89%). None of the female CGs was employed. The mean MCSI score was 13.8. Gender, age, marital status, and duration of care all did not have a significant effect on the total (P=0.640, 0.848,0.839, 0.110 respectively). Female gender (P=0.0075) was a factor leading to increased emotional adjustments. Single CGs had had increased changes in personal plans (P=0.014), and married CGs found

the behavior of the patients less upsetting (P=0.0425). There was no significant difference between the total (P=0.906) or individual components between daughters and daughter-in-laws.

**Conclusion:**There is a need to identify the factors responsible for major CG stress by conducting similar studies and to define structured intervention for evaluating and preventing problems of caregivers.

# PREVALENCE OF STRESS IN UNDERGRADUATES' MEDICAL STUDENTS, IN PRIVATE MEDICAL COLLEGE IN ISLAMABAD.

Anum Abbas.

Islamabad Medical & Dental College, Islamabad.

**Background:** Psychological stress among medical students is common finding. The prevalence of perceived stress among medical students affects not only their academic performances but also, to some extent, their health.

**Objective:** The present study was undertaken to determine the prevalence of self - perceivedpsychological stress among Under-Graduate medical students. Materials and Methods: A cross sectional study using self-administered questionnaire (GHQ-12) was conducted among a sample of undergraduate students chosen from all the years of MBBS from a private medical college in Islamabad.

**Results:**In this study 75.7% of the 1 year class students reported having stress. 45.7% of 2 year class students reported having stress.30% of 3rd year class students, 50% of 4th year class students, and 46.6% of final year class students reported having stressed. Conclusion:This study has found that majority of undergraduate students experience stress.Students should be encouraged to approach the senior students and designated faculty members for guidance and counseling.

# TO ASSESS THE ADAPTATION LEVEL OF STUDENTS FROM A DIVERSE BACKGROUND OF BRITISH EDUCATIONAL SYSTEM AFTER JOINING THE LOCAL EDUCATION SYSTEM IN A MEDICAL COLLEGE

Kamran Mehmood. Islamabad Medical & Dental College, Islamabad.

The purpose of this study is to focus on those Medical Students who have come to a Medical college from a diverse background of British educational system (Cambridge, Edexel etc.) during their High schools rather than the orthodox local educational system which is prevalent in our country. The Study was conducted in order to find the level of adaptation in such students

when they join the local education system in a Medical college having a complete different methodology of learning from the one they were used to. Generally, there is a fraction of superiority complex among the Alevel students over those who belong to the local system i.e. FSc, but when these students have to continue their studies in a college having students and faculty belonging from the mainstream education system, they find it difficult to adjust in an entirely alien learning environment. The study has focused on Medical students ranging from first year to final year and intends to find out the most common problems that are faced by them when they start their medical studies. Students were handed with a written questionnaire having a range of questions concerning the type of difficulties that were being faced by them at the onset of joining the Medical College. Samples were taken from different medical colleges in Islamabad and only those students were included who belonged from the background of foreign education system. Most of the students showed variable discomforts in adjusting to a completely new setup. One out of several results of the study has shown that generally the male students had difficulties in coping up with an altogether different methods of learning while female students faced problems in socializing with their new colleagues.

Conclusion: Medical Students who belonged to foreign education system before joining a Medical College have to adjust to a completely different system which may affect their studies for at least first couple of years of their medical education.

#### FREQUENCY OF PSYCHOLOGICAL PROBLEMS IN TRAUMATIC SPINAL CORD INJURY PATIENTS

Heyyan Bin Khalil Army Medical College, NUST, Rawalpindi.

Background:Spinal Cord Injury (SCI) is one of the most devastating conditions known to mankind. The instantaneous effects of injury result in a total disruption of the victims' life. It is a massive assault to the psyche as well as the body. Although psychological problems were thought to be inevitable consequence of SCI different studies reported them in only 20 - 45 % of patients.

Objective:To investigate the frequency of psychological problems in SCI patients and correlate it withlevel of injury, severity of injury and different complications. Method: It was a cross sectional study of 22 patients. SCI patients admitted to AFIRM were included inthe study. Psychological assessment was done using the Depression Anxiety and Stress Scale (DASS). Results:Out of the 22 patients studied, 20(90.9%)

were males while 2(9.1%) were females. Averageage was 34.22 years. 59.1% were cases of complete SCI. 54.5% patients had thoracic level of theirSCI. Patients who experienced depression were 45.5%, of which 9.1% had extremely severedepression. 68.2% patients suffered from anxiety, out of which 9.1% had anxiety of extremely severenature and 31.8% had mild anxiety. Patients with stress were 36.4% out of which 13.6% presented withsevere stress.

**Conclusion:** Psychological problems are highly prevalent in patients with SCI, that's why to bettermanage these patients these psychological problems need to be identified and addressed properly.

# ASSOCIATION OF DIABETIC NEUROPATHY WITH DURATION OF TYPE-2 DIABETES AND GLYCEMIC CONTROL

Muhammad UmerNisar, Ambreen Asad, Nazia Ali, Mohsin Ahmed Qayyum, Hafsa Maryam, Mohsin Javed, Mohsin Jamil Yusra Medical and Dental College, Islamabad.

Background: Diabetes mellitus is a metabolic disorder in which a person has high blood sugar, eitherbecause the body does not produce enough insulin, or because cells do not respond to the insulin. High blood sugar produces the symptoms of polyuria, polydipsia and polyphagia. Diabetic neuropathiesare thought to result from diabetic microvascularinjuries that supplyvariety of nerves. Common conditions associated with Diabetic Neuropathiesinclude third nerve palsy, mononeuropathy, diabeticamyotrophy and thoracoabdominal neuropathy. Diabetic neuropathy can lead to foot ulcers andultimately amputation leading to disability or morbidity. Symptoms include paresthesias and numbnessin distal extremities Sensory, motor and reflex measures of upper and lower limb, cranial nerves andautonomic functions are used for diagnosis. Poor glycemic control, undiagnosed type-2 diabetes, increase alcohol intake, low socioeconomic status and renal failure are risks for development of Diabetic neuropathy. Duration of diabetes influences the neuropathy and tight glycemic control isalready predicted available intervention for preventing complications. Our study is aimed at diagnosing diabetic neuropathy using clinical examination and Nerve Conduction Studies.

**Objective:**To correlate the glycemic control and duration of diabetes with diabetic neuropathy **Methods:** A pilot study was done on 9 patients of type 2 diabetes.Our research is still in progress.(Sample size was 50 patients and time period for our research is 6 months). Clinical examination, NCSand glycemic index was assessed by standard tests and data was recorded on pre designed questionnaire proforma for analysis. Inclusion

criteria wasknown type 2 Diabetics, Diabetes for morethan 10 years and exclusion criteria includedvery ill patients and Type 1 Diabetics. Statistical analysiswas done using SPSS-20. Patient confidentiality was maintained and ethical approval was taken fromethical committee of YusraMedical and Dental College. Consentwas taken from patients and data wascollected on standard forms. Copy of each form is attached.

**Results:**In total 9 patients when blood sugar fasting (BSF) was compared with clinical neuropathy, theneuropathy was more prominent in patients who had increased BSF and the correlation showedsignificance at point 0.008 level. Similarly BSF positively correlated with neuropathy detected on nerveconduction studies (NCS) with significance of 0.028. When duration of diabetes was compared withclinical neuropathy and NCS the correlations were insignificant.

**Conclusion:**Better glycemic control is more promising for preventing diabetic neuropathy andirrespective of the duration of diabetes.

#### NEUROPHOBIA: IDENTIFYING ITS CAUSES AND FINDING WAYS TO REDUCE IT

Sameen Aslam, Seyyedha Abbas, Sannan-ur-Rehman Foundation University Medical College, Rawalpindi.

**Background:** For over decades, it was observed that medical students have an astounding fear ofneurology compared to other subjects in the field of medicine. Objectives: The purpose of this study was to find out the possible causes of neurophobia, finding outways in which it can be reduced and also investigating the effectiveness of the problem based learning(PBL) system on the rise or recede of neurophobia in subsequent generations of medical students.

Materials and Methods: An open ended questionnaire was given to willing students of foundationuniversity medical college, divided into three groups, two of them with pbl and one with conventionalteaching. Results: Telling students that neurology is difficult has virtually played no role in developing neurophobia, hence attitude of teachers rather than words have a greater impact on students. The deficiency of students in neurology dates back to their school times and steps can be taken to improve that. Those with a medical background are more prone to neurophobia, probably because of discouraging attitudes of family and friends. Good teachers have proved to reduce the rate of neurophobia and lack of understanding of neurosciences which has long term implications. Internet

isan important source of neurosciences knowledge for students and must be developed.

**Conclusions:** PBL system has reduced neurophobia, either by increasing students' interest or bymaking teachers more responsible and cooperative for better understanding of students.

# HOW SPINAL CORD INJURY PATIENTS MANAGE THEIR BLADDER AFTER 6 MONTHS OF REHABILITATION AT AFIRM?

Dr. Syed Hussain Shah, Dr Khalil Ahmad, Dr.Akhtar Waheed, Dr. Nida Fatima.

Armed Forces Institute of Rehabilitation Medicine, Abid Majed Road, Rawalpindi

**Objectives:**To find how spinal cord injury patients were managing their bladder after sixmonths of rehabilitation and compare it with international guidelines.

**Materials and Methods:** It's a cross sectional study conducted at Armed Forces institute ofRehabilitation medicine Rawalpindi from Feb 2012 to Jan 2013. All spinal cord injury patientswho had completed six months of rehabilitation were included in the study. SPSS version 17was used for data analysis.

Results: Total 31 patients were included in the study. All were males. Average age ofpresentation was 34 years with standard deviation of 1.50. Most common level of injury waslower thoracic in 41.9 %( 13) patients followed by cervical and upper thoracic in 22.6 % (7). Injury was complete in 74.2 % (23) patient and it was incomplete in 25.8 %( 8) patients. Roadtraffic accidents was most common cause of injury in 35.5 %( 11) followed by falls 32.3 %( 10) and gunshot injury in 6.5(2) patients. Bladder was managed by clean intermittent catherizationin 54.8% (17) patients, indwelling Foley's catheter was passed in 35.5% (11) patients, Suprapubic catherization was done in 3.2% (1) patient and 6.5% (2) patients gained self voiding aftersix months of rehabilitation.

**Conclusion:** Most of spinal cord injury patients were doing clean intermittent catherizationafter six months of rehabilitation which is a recommended method of bladder management. Still large percentage of patients was left with indwelling Foley's catheter.

#### SURGICAL MANAGEMENT OF ODONTOID FRACTURE IN ELDERLY: A CASE REPORT FROM PAKISTN

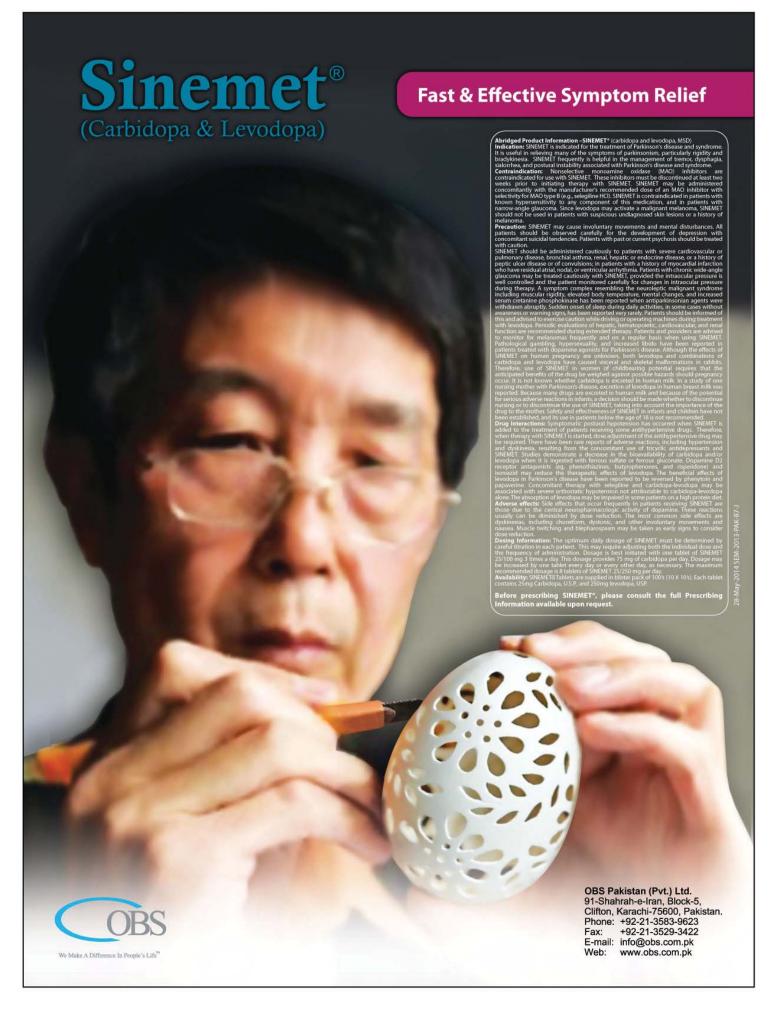
Muhammad Jawad Noon, Rana Muhammad Omar Daraz Khan, Dr. Muhammad Nadeem, Dr. Inayatullah Khan Shifa College of Medicine, Islamabad.

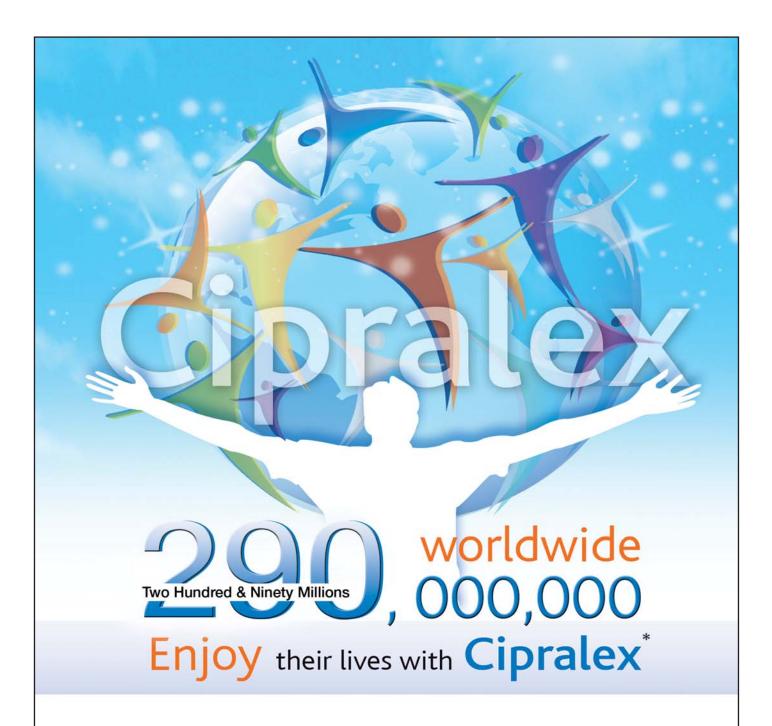
**Background:** Odontoid fractures are the most common cervical spine fractures in the elderly. They are potentially

life threatening and thus, their appropriate management is necessary. In geriatric population, conservative treatment is associated with high risk of complications and lower fusion rate so surgical approach is preferred. We combined transoral odontoidectomy with occipitocervical fixation for themanagement of odontoid type II fracture in a 75 year old man. It is an extremely rare surgery and to ourknowledge and literature search, this is the first such case report from Pakistan.

Case Report: A 75 year old man with one day history of fall, presented with neck pain and progressiveslurring of speech. On examination, he had restricted neck flexion, extension and lateral rotation. Theneurological examination was intact. CT scan and MRI of spine showed, odontoid type II fracture withposterior displacement, causing compression of cervico-medullary junction. Patient was advised to wearcervical collar but he was non-compliant. After a few hours, his oxygen saturation dropped and power inall his limbs reduced to 1/5. He was rushed to OR where transoral odontoidectomy was done, followedby occipitocervical fixation via posterior approach. Post-operative CT scan showed improved alignment of the cervical spine and relief of compression effect on cord. Patient demonstrated progressiverecovery with no neurological deficit on the 11th post-operative day, when he was discharged. He wasadvised to wear cervical collar when mobilizing.

**Conclusion:** Despite of its challenging nature, we report a successful upper cervical spine surgery withno post-operative complications and neurological improvement in an elderly patient.





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