
*POSTER SURGICAL
SECTION*

PS-01

ASSOCIATED FACTORS OF TOOTH WEAR AMONG 16-YEAR-OLD SECONDARY SCHOOL CHILDREN IN KOTA BHARU KELANTAN

Bibi Saerah NAK*, Ismail NM **, Naing L, Ismail AR****

***School of Medical Sciences, **School of Dental Sciences, Universiti Sains Malaysia, Health Campus, 16150 Kubang Kerian, Kelantan**

PURPOSE :

Tooth wear is a common finding in oral examinations. Pathological tooth wear (PTW) is the amount of wear that exceeds the normal phenomena of ageing or the normal threshold value of wear. The objective of this study was to determine the associated factors of PTW among 16-year-old secondary school children.

METHODS :

This case-control study involved 576 participants randomly selected from eight government secondary schools. The Smith and Knight Tooth Wear Index and WHO criteria were used for charting of tooth wear and dental caries respectively. Data were analyzed using a simplified Microsoft Excel program developed based on the index, to quantify PTW. Controls were subjects with no PTW indicated by zero scores on all tooth surfaces. Cases were subjects with PTW having at least one surface scoring 1 for tooth wear. Consequently, responses were obtained from self-administered questionnaire containing socio-demographic profile of the family, general questions, oral hygiene and food and drinks practices and other associated variables for tooth wear, which was previously developed based on expert opinions.

RESULTS :

About 40% and 57% were males were in controls and cases respectively. On performing multivariable analysis, sex, monthly household income, carbonated drinks, duration of intake of orange juices, caries experience and swimming were significantly associated with PTW.

CONCLUSION :

In conclusion the factors associated with PTW were no different from those encountered in Western societies. Realizing that some significant variables were modifiable, oral health promotion should emphasize on this information. The erosive potential of some foods and drinks require further investigation.

PS-02

PREVALENCE AND MEAN SCORES OF RAW AND PATHOLOGICAL TOOTH WEARS

Bibi Saerah NAK*, NM ISMAIL, NAING L **, AR ISMAIL****

***School of Medical Sciences, **School of Dental Sciences, Health Campus Universiti Sains Malaysia, 16150 Kubang Kerian, Kelantan**

PURPOSE :

Worn-out surfaces or raw tooth wear (RTW) are a common feature in human dentition indicating normal physiological wear and tear process. When the amount of wear exceeds the rate of physiological wear, it is called pathological tooth wear (PTW). Excessive wear can lead to tooth morbidity. The aim of this study is to determine the prevalence and mean scores of RTW and PTW according to mouth quadrant and mean percentage of tooth surfaces with PTW among 16-year-old school children.

METHODS :

This cross-sectional study involved 688 participants randomly selected from secondary schools in Kota Bharu Town. The Smith and Knight Tooth Wear Index was used. Data were analyzed using a simplified Microsoft Excel program developed based on the index to quantify PTW. Bar graphs were plotted for mean RTW and PTW scores according to mouth quadrant.

RESULTS :

About 44% of participants were male and 56% were female. The prevalence of RTW was 100%. About 23.5% had exposed dentine. When tooth surfaces were considered, the prevalence of RTW was 32.8%. The prevalence of PTW by subject was found to be 20.1%. The greatest wears were observed on the upper and lower incisal quadrant for RTW and PTW respectively. The mean percentage of tooth surfaces with PTW was 2.1%.

CONCLUSION :

PTW affects about 20% of participants with similar wear patterns compared to those encountered in the West. Oral health promotions messages should emphasize the danger of tooth wear at an early age to prevent structural tooth damage. Further investigation is required to identify risk factors of tooth wear.

PS-03

***EXTRACRANIAL MENINGIOMA IN THE PARAPHARYNGEAL SPACE –
A CASE REPORT***

Wan Najwa Zaini WM, Noreen Norfaraheen LA, Salmah WM.

**Department of Radiology, School of Medical Sciences, Universiti Sains Malaysia,
Health Campus, 16150 Kubang Kerian, Kelantan.**

INTRODUCTION :

Extracranial meningiomas are rare, being twenty times less common than their intracranial counterpart. Primary extracranial meningioma in the parapharyngeal space is extremely rare. We present one such case highlighting its rarity and difficulty in coming to a diagnosis.

CASE REPORT :

A 19 year old female presented with an enlarging left neck mass for the past three years. It was occasionally painful, associated with loss of appetite and weight. Physical examination showed a firm swelling at the angle of left mandible associated with left eleventh and twelfth cranial nerve palsies. Per oral examination and endoscopy showed bulging of the left lateral pharyngeal wall.

Computed Tomography (CT) Scan and Magnetic Resonance Imaging (MRI) showed a left parapharyngeal tumour with local invasion to the surrounding muscles, soft tissue and vessels with bone exostosis. There was no intracranial involvement. Initial endoscopic biopsy was negative. Subsequent CT guided biopsy revealed meningotheial meningioma. The patient underwent subtotal debulking of the tumour, followed by adjuvant radiotherapy. Post-operatively, she developed left seventh cranial nerve and left recurrent laryngeal nerve palsies. She is currently under surveillance and physiotherapy in HUSM.

CONCLUSION :

Primary extracranial meningiomas are rare tumours. Although they have same histological features, radiological appearances are slightly different from intracranial meningiomas. These differences pose a great challenge for the radiologists in diagnosing and clinicians in managing such cases. Although rare, it should be kept in mind as a differential diagnosis of a head and neck tumour. Surgical resection is the treatment of choice, and radiotherapy is advocated only when surgical therapy fails or when there is rapid progression of disease.

PS-04

MALIGNANT FIBROUS HISTIOCYTOMA OF THE RECTUM

Mohd. Shariman MS, Mutum Samarendra Singh, Effat O.

**Department of Pathology, School of Medical Sciences, Universiti Sains Malaysia,
Health Campus, 16150 Kubang Kerian, Kelantan**

INTRODUCTION :

Malignant Fibrous Histiocytoma is one of the common malignant soft tissue tumour occurs in adults that is mesenchymal in origin. However, it is rare in the gastro-intestinal tract, including rectum. The common sites are in the extremities. This tumour shows no evidence of true histiocytic differentiation. Without proper histological evaluation the diagnosis is difficult. Therefore, small biopsy from a rare site with no definite cell orientation and unhelpful histochemistry and immunochemistry examination, a thorough evaluation should be made.

CASE REPORT :

We presented a malay female with history of chronic constipation with constitutional symptoms. Clinical examination reveals a fungating growth at the rectum. The patient then underwent synchronous combined abdominal-perineal resection. Grossly, the tumour formed an ulcer at the rectum with rolled edge. Microscopically, the cells are arranged in storiform pattern having spindle shaped cells. The nuclei are pleomorphic. The tumour cells expressed vimentin and CD68.

CONCLUSION :

In conclusion, based on multiple reports of Malignant Fibrous Histiocytoma of the rectum, the above tumour should be considered as one of the differential diagnosis of both clinician and pathologist. Detailed evaluation of clinical history, radiology and histology is essential.

PS-05

PENETRATING KERATOPLASTY AS AN ERADICATION OF SEVERE FUNGAL KERATITIS

Syaratul Emma H*, Shawarinin J*, Effat O**, Chen CC***, Ravichandran M***, Liza-Sharmini AT*, Ibrahim M*.

*Department of Ophthalmology, **Department of Microbiology, ***Department of Pathology, School of Medical Sciences, Universiti Sains Malaysia, Health Campus, 16150 Kota Bharu Kelantan.

INTRODUCTION :

Contact lens wear has been identified as one of the common risk factors of ulcerative keratitis, which may leads to serious, vision threatening complication. Despite the advances in the technology of contact lens, incidence of this complication remains high with the increasing number of users. Studies have shown *P Aeruginosa* remains the likely etiology in the contact lens related ulcer, followed by other Gram positive bacteria, *Staphylococcus spp.*, *Streptococcus spp.* Fungus is not a common etiology, occurring less than 5% in this condition. We reported a case of severe fungal keratitis in a contact lens user, which not only successfully eradicated by penetrating keratoplasty but also aid in the confirmation of diagnosis.

CASE REPORT :

A 39 year old lady presented with an acute onset of right eye redness, pain and photophobia for 1 day duration. For the past 5 years, she had been wearing a disposable, soft contact lens. Ocular examination revealed multiple rounded feathery infiltrate noted at paracentral area. Clinical diagnosis of fungal keratitis was made and topical Amphotericin B was started intensively, with the coverage of topical antibacterial Ceftazidime and Gentamicin. The corneal infiltrate progressively worsened with total hypopyon. Topical natamycin was also commenced, with no evidence of improvement. Therapeutic penetrating keratoplasty was finally performed after 1 and half months of presentation. Repeated corneal scrapping and culture remains negative, the diagnosis was only confirmed by polymerase chain reaction of the excised cornea post keratoplasty. True septate of non branching hyphae was also noted on the histopathology slide of the excised cornea.

CONCLUSION :

Fungal, as the etiology cause, should always be considered in any case of corneal ulcer which does not show any improvement with intensive antimicrobial treatment. Although not commonly related, this case illustrates a contact lens related fungal ulcer. Corneal biopsy seems highly recommendable in such a case, where other investigation was negative.

PS-06

UNUSUAL CASE OF NOCARDIA KERATITIS

Azreen Redzal A*, Bakiah S*, Zunaina E*, Siti Suraiya MN, Habsah H****

***Department of Ophthalmology, **Department of Microbiology and Parasitology, School of Medical Sciences, University Sains Malaysia, 16150, Kubang Kerian, Kelantan, Malaysia.**

INTRODUCTION :

Nocardia spp is a rare aetiological agent of corneal ulcer especially in the absence of history of trauma. We report a case of an atypical presentation of corneal ulcer caused by *Nocardia spp*.

CASE REPORT :

A 19-years old Malay man, a non contact lens user with a previous good vision, presented with a history of non traumatic painful reduced vision with redness of the right eye for two weeks duration. He noted a cornea opacity one week after the onset of the sympoms. He was initially treated by a general practitioner without improvement and sought further treatment at Hospital USM. Ocular examination showed paracentral ulcer, with minimal epithelial defect which showed a clearly demarcated stromal infiltration, surrounded by microabscess at the ulcer edge. Topical gentamicin was commenced empirically and showed rapid clinical response. Cornea scrapping was sent for culture and sensitivity and isolated *Nocardia* species, The patient's condition improved remarkably and the ulcer healed with cornea opacity the visual axis.

CONCLUSION :

This case illustrates an infection by *Nocardia* species which showed unusual features in a non-traumatic case of cornea ulcer. Appropriate management with gentamicin has showed rapid and remarkable outcome.

PS-07

RETROSPECTIVE REVIEW OF DDH IN HUSM

Shukrimi A*, Sulaiman AR, Sallehuddin AY**, Munajat I****

***Dept. of Orthopaedics, Traumatology & Rehabilitation, Kulliyah of Medicine, International Islamic University of Malaysia, Kuantan, Malaysia. **Dept. of Orthopaedics, Hospital Universiti Sains Malaysia, Kubang Kerian, Kelantan, Malaysia**

INTRODUCTION :

The incidence of DDH (Developmental Dysplasia of Hip) in Malaysia was low compared to other countries. We conducted a study to review cases of DDH in our practice since last 8 years. The aim of the study is to find out the effectiveness of perinatal screening of DDH in our practice.

METHODS :

A retrospective review of DDH from January 1998 till March 2006 was conducted. Patients records for sex, age at presentation, site, method of delivery and risk factors of DDH were reviewed.

RESULTS :

There were 16 patients presented to our clinic for DDH ,10 Female, and 6 male . Only 5 patients (31%) diagnosed at birth from perinatal screening. Out of that, 5 involved left hip, 6 right and 5 had bilateral. None had a positive family history. Three were first born baby. 3 cases were breech delivery and four associated with other abnormalities.

CONCLUSION :

High rate of late presentation may indicate a poor perinatal screening of DDH in our practice.

PS-08

OPTIC NEURITIS IN A 10-YEAR OLD GIRL: IS IT ADEM?

Rohana AR*, Shatriah I*, Salmi AR, Bakiah S*, Wan Hazabbah WH***

***Department of Ophthalmology, **Department of Paediatric, School of Medical Sciences, Universiti Sains Malaysia, 16150, Kubang Kerian, Kelantan, Malaysia.**

INTRODUCTION :

Optic neuritis is an uncommon presentation in children. We reported a rare presentation of optic neuritis in a child secondary to a probable diagnosis of recurrent acute disseminated encephalo-meningitis (ADEM).

CASE REPORT :

A 10-year old Chinese girl initially presented with ataxic gait and cerebellar sign was diagnosed with acute disseminated encephalo-meningitis (ADEM). She recovered fully with steroids therapy. A year later, she presented with sudden severe visual loss in her right eye. Her visual acuity was 'counting finger' with positive afferent pupillary defect in her right eye. Funduscopy examination revealed a swollen optic disc in the right eye. Magnetic Resonance Imaging (MRI) of the brain revealed multiple non-enhancing hyperintense lesions in the left occipital lobe, basal ganglia and periventricular regions, suggestive of recurrent ADEM. She was treated with intravenous methylprednisolone, followed by a slow tapering of oral prednisolone. She responded well to treatment and attained visual acuity of 6/6.

CONCLUSION :

Diagnosis of ADEM in a case of unilateral optic neuritis is less common in children and seldom reported. We illustrate this case to highlight the possibility of this disease in a younger age group, occurring in this part of the world.

PS-09

PROXIMAL FEMORAL FOCAL DEFICIENCY AND RADIOHUMERAL SYNOSTOSIS : CASE REPORT OF AN ATYPICAL ASSOCIATION

Sulaiman AR., Nawaz H., Munajat I., Sallehudin AY.

Department of Orthopaedics, School of Medical Sciences, Universiti Sains Malaysia, Kubang Kerian, 16150 Kota Bharu, Kelantan

INTRODUCTION :

Proximal femoral focal deficiency (PFFD) is a congenital birth defect in which proximal end of femur does not have a normal progress during the embryological development of a fetus. It was reported to be associated with growth retardation of tibia and fibula, ulna hypoplasia, clubfoot and Robin anomalad. We report a radiohumeral synostosis associated with PFFD which has never been reported in English literatures.

CASE ILLUSTRATION :

An eleven year old girl was brought to our care due to fracture femur. Further clinical and radiological assessment revealed that she had right clubfoot, left radiohumeral synostosis and bilateral PFFD. Her fractured femur was managed accordingly and there was no delay in fracture healing.

The mother underwent intravenous urogram (IVU) in early 1993 and noted to be pregnant two weeks later. The mother decided to continue with her pregnancy and she gave birth at term. The child started walking at the age of 5. At present, she walks without aid with short limb gait. Her left elbow is fixed in 90° flexion in mid pronated forearm. She uses her left shoulder motion to compensate for the disability. The wrist and hand functions are normal.

CONCLUSION :

Radiation is a leading cause of mutations that can develop in uteri. Limb bud formation and organogenesis are at their peaks in the period between fourth to eighth week of gestation. An IVU requires a minimum of 6 times of pelvic xray. Thus 12 mGy could have been absorbed to the fetus when the mother underwent IVU in the first trimester. This could be an important factor which needs to be considered with this complex combination of disorder. However the exact age of pregnancy and radiation dose exposed in this case are uncertain.

PS-10

THE REACTIVATION OF TUBERCULOSIS: MUCH RARER WITH OCULAR INVOLVEMENT

S. Raihan I, Emma SH, Wan Norliza WM, Bakiah S.

Department of Ophthalmology, School of Medical Sciences, Universiti Sains Malaysia, Health Campus, 16150 Kota Bharu, Kelantan.

INTRODUCTION :

Tuberculosis is one of the leading causes of death worldwide and cause a significant ocular morbidity. This problem has been aggravated by the human immunodeficiency virus (HIV) pandemic compounded with the recent increasing incidence of microbial resistance to the antituberculosis drug. Ocular TB has always been considered rare, occurring only in about 1% of all cases of TB. Reactivation of ocular tuberculosis is even rarer, and to the best of our knowledge, this is the first reported case in Malaysia.

CASE REPORT :

We reported a case of a 14 year old Malay girl, who presented with a 3 days history of poor vision over the left eye. It was sudden in onset, non progressive and associated with mild redness and photophobia. She had history of low grade fever, generalized malaise and headache 1 week prior to the presentation. A year ago, patient was previously managed as presumed ocular tuberculosis and had completed anti-tuberculosis regime, 4 months prior to the current presentation. Examination revealed bilateral nongranulomatous panuveitis. There was severe vitritis with multiple chorioretinal nodules noted at the posterior pole and peripapillary area in both eyes. The optic disc was swollen and hyperemic, and macula was also oedematous. Systemic examination revealed multiple, shotty cervical lymphadenopathy and also hepatosplenomegaly. Investigation showed evidence of leucocytosis with raised ESR of 110 mm/Hr. Diagnosis of reactivation of ocular tuberculosis was made and anti-tuberculosis drug was reinstated, which was planned for an 18 months regime. Oral prednisolone 30 mg per day was started after 4 days of antiTB regime. The inflammation improved, with resolution of the chorioretinal lesion.

CONCLUSION :

A reactivation of ocular tuberculosis is considered rare and seldom reported. This case showed the contrary, and it does exist in the population although in an otherwise immunocompetent patient.

PS-11

SYNCHRONOUS ENDOMETRIOID OVARIAN TUMOUR AND SQUAMOUS CELL CERVICAL CARCINOMA

Siti Suhaila Ismail, Juhara Harun, Rohaizan Yunus, Abdul Kareem

**Radiology Department, School Of Medical Sciences, Universiti Sains Malaysia
16150, Kubang Kerian, Kelantan, Malaysia**

Introduction :

Synchronous carcinomas of two different histopathology involving two different sites are relatively uncommon. They represent a diagnostic and therapeutic challenge, both to the radiologist and physician managing the patient. A case of coexistence of endometrioid ovarian carcinoma and squamous cell carcinoma of the cervix was illustrated.

Case report :

A 46 years old lady, para 5 presented with history of prolonged menses associated with intermenstrual bleeding, post coital bleed and palpable abdominal mass. Speculum examination showed fungating cervical mass. CT scan abdomen demonstrated a huge septated cystic pelvic mass arising from the ovary. Another heterogenous mass is seen in the cervix. Liver metastases also noted. She underwent laparotomy and histopathological examination and previous pap smear taken confirmed the diagnosis.

Conclusion :

A diagnosis of having concurrence ovarian tumour and cervical tumour is very uncommon. Only few studies have reported coexistence of double or triple pathology in same patient. Making a diagnosis for this patient is a great challenge for us in radiology as it is uncommon to have two different pathologies arising from two different site at one time.

PS-12

FOCAL HEPATIC ENHANCEMENT IN SUPERIOR VENA CAVA OBSTRUCTION

Siti Suhaila Ismail, Siti Jusna Mohamed, Win Mar@Salmah J, Abdul Kareem

**Radiology Department, School Of Medical Sciences, Universiti Sains Malaysia
16150, Kubang Kerian , Kelantan, Malaysia.**

Introduction :

Compression to the superior vena cava (SVC) as a complication of malignant or benign disease that compressed, invade or occlude the SVC causing development of collateral routes to the liver is uncommon. A case of patient diagnosed of having small cell bronchogenic carcinoma presented with symptoms of SVC obstruction and liver collaterals presented.

Case report :

A 49 year old man chronic smoker, presented with high grade fever, cough and shortness of breath. Examinations showed presence of dilated vein in neck and chest, dullness with reduced breath sound, vocal resonance and fremitus of the right upper and mid zone of the lung. CT thorax showed an aggressive lung mass occupying the right upper and midzone of the lung with multiple liver metastases and intrahepatic portosystemic shunt secondary to SVC obstruction. Biopsy of the mass under CT guided performed and histopathological examination confirmed the diagnosis of small cell carcinoma of the lung.

Conclusion:

Superior vena cava syndrome (SVCS) is a group of symptoms due to impairment of blood flow to the right atrium. About 95% of SVCS are secondary to neoplasm, small cell bronchogenic carcinoma being the commonest. Collateral routes to the liver in the presence of SVC obstruction is uncommon and can be seen as focal enhancement of the liver. Other differentials such as portal vein thrombosis, liver metastases or focal nodular hyperplasia should also be considered as they can presented with similar appearance.

PS-13

EXTRADURAL SPINAL ANGIOMA: A DIAGNOSTIC DILEMMA.

Wan Daizyreena WJ, Win Mar@Salmah J, Rohaizan Y.

Department of Radiology, School of Medical Sciences, University Sains Malaysia, Health Campus, 16150 Kubang Kerian, Kelantan, Malaysia.

INTRODUCTION :

Extradural spinal vascular angiomas are rare occurrence. They represent a group of lesions of those neurologic manifestations are determined by their particular location and the relationship to spinal cord arterial and venous structures. These lesions include intramedullary arteriovenous malformations, extradural arteriovenous malformations and cavernous malformations. The clinical presentations, imaging features and histology appearance in this case are not typical of any vascular angiomas. This report is about the diagnostic dilemma facing by radiologists, neurosurgeons and pathologists.

CASE REPORT :

A 14-year-old girl was presented with one week history of back pain which was aggravated by bending forward. She also had progressive weakness and numbness of both lower limbs leading to total paraplegia. Her sensory loss was from T10 level downward and knee and ankle reflexes were absent bilaterally. CT myelogram, the first radiological investigation revealed an extradural mass at T8-T9 level. On magnetic resonance imaging, the features were of arachnoiditis and an extradural mass or haematoma. To correlate these two findings, there were two possibilities. One could be an extradural tumour with arachnoiditis secondary to previous myelogram and the second possibility was a primary extradural tumour with bleeding causing arachnoiditis. She had undergone urgent decompression operation of the spinal cord and intraoperative finding was features of an extradural vascular tumour. Histopathology examination found that the tumour mass was a vascular lesion composed of several thick-walled vessels, mostly abnormal vein with collagenous wall. The impression was a benign lesion with vascular malformation with differential diagnosis of arteriovenous malformation and cavernous haemangioma. She had minimal sensory improvement post surgery and currently on physiotherapy treatment.

CONCLUSION :

Spinal vascular malformations are rare causes of neurologic morbidity. Cases of pure extradural spinal vascular angiomas may cause diagnostic problem radiologically as seen in this patient.

PS-14

A LADY PRESENTED WITH UNCOMMON SITE OF DOLICHOECTASIA.

Zulkifli Zaki AG*, Win Mar@Salmah J*.

***Department of Radiology, Universiti Sains Malaysia, 16150 Kubang Kerian, Kelantan.**

INTRODUCTION :

Intracranial arterial dolichoectasia is a condition characterized by enlargement, tortuosity, or elongation of major arteries at the base of brain. It is usually seen at distal vertebral arteries, basilar artery and the distal internal carotid artery segments. Dolichoectasia is uncommon disease. Most of cases are in the region of vertebrobasilar artery which seen in less than 0.05% of population. Therefore, dolichoectasia of internal carotid artery is a rare condition. Atherosclerosis is the most common cause. However a dissecting process could be a cause. Predisposing traits include male sex, hypertension, aging and smoking. Symptoms resulting from structural abnormality are generally fall into two groups: those resulting from compression of adjacent cranial nerves and brain stem or ischaemic event.

CASE REPORT :

62 years old Malay lady presented with sudden onset of loss of consciousness preceded by headache and vomiting. She has hypertension for one year, however not on regular treatment and she is not diabetic. Clinically Glasgow Coma Scale was 6/15 and need ventilation support. Blood pressure was well controlled and cranial nerves were grossly intact; however had power of 4/5 for both upper and lower limbs. Rests of systems were unremarkable. Computerized tomography of the brain was performed and extensive subarachnoid haemorrhage was noted. Proceeded with cerebral angiogram which revealed Dolichoectasia of right supraclinoid Internal carotid artery and right posterior cerebral artery.

CONCLUSION :

Dolichoectasia is uncommon in female and usual position is at vertebrobasilar artery. This is uncommon case as it occurred in female patient and involved right internal cerebral and right posterior cerebral arteries.

PS-15

A TRANSCRANIAL APPROACH FOR RESECTION OF OLFACTORY NEUROBLASTOMA : A CASE REPORT

Nasser AW*, Hilol Kanti P*, J Abdullah*, Hasnan J, Win Mar@Salmah J***, Khairi A******

Department of Neurosciences, **Department of Pathology, ***Department of Radiology, *Department of ORL, School of Medical Sciences, Universiti Sains Malaysia, Health Campus, 16150 Kota Bharu, Kelantan**

INTRODUCTION :

Olfactory Neuroblastoma, or Estheioneuroblastoma is a rare malignant tumor, accounting for 3% of intranasal neoplasms, which arises from the anterior cranial fossa. It is thought to arise from the specialized olfactory neuroepithelium lining the roof of the nasal vault, in close proximity to the cribriform plate. Craniofacial resections are the standard approach in cases of olfactory neuroblastoma where the majority of the lesions lie within the nasal cavity. We report a case of a patient with esthesioneuroblastoma where almost all the lesion could be removed via a transcranial approach alone with a satisfactory outcome.

CASE REPORT :

A 35-year old man presented with history of a mass protruding from his left nostril which has grown significantly bigger during the last ten years. His facial features were contorted by the lesion with enlargement of external nares. A whitish lesion began to protrude through the left nostril. Adapting as a mouth breather, he experienced halitosis. An MRI scan brain with contrast demonstrated a tumour mass encroaching into the right frontal sinus, medial and superior orbital wall, maxillary sinuses, with involvement of the anterior cranial fossa. The tumour was removed via a bicoronal craniotomy with extra-dural subfrontal transbasal approach. From this opening, we entered through the roof of the nasal cavity and the intra-nasal part of the lesion was removed under direct vision. Nearly 90% of the tumor was removed in this operative procedure. The patient made a speedy recovery, and claimed that his sense of smell has returned significantly. On follow up, his scar is barely visible behind the hairline. His confidence has improved post-operatively.

CONCLUSION :

In our particular case, we have successfully removed majority of the lesion via a transcranial route. A facial incisions or osteotomies has been avoided.

PS-16

***A CASE OF PRIMARY INTRAOSSEOUS MICROCYSTIC MENINGIOMA
PREOPERATIVELY DIAGNOSED AS OSTEOGENIC TUMOUR***

Nujaimin U*, Nasser AW*, Venkatesh N, Zamzuri I*, J Abdullah***

***Department of Neurosciences, **Department of Pathology, School of Medical Sciences, Universiti Sains Malaysia, Health Campus, 16150 Kota Bharu, Kelantan.**

INTRODUCTION :

Primary intraosseous meningioma is very rare tumour and most commonly diagnosed as primary osteogenic tumour of the skull preoperative and intraoperatively. We reported a first case of primary intraosseous meningioma in Hospital University Sciences of Malaysia which preoperatively was diagnosed as osteoma.

CASE REPORT :

A 50 year old female presented with a slow growing, stony hard mass over the right parietal region which progressively growing in 4 years. Neurological examination was normal. Plain skull radiograph showed 6 cm diameter rounded mass with hyperostosis and sunray appearance. CT scan shows hyperdense lesion with homogenous enhancement of the underlying dura. Intraoperatively revealed hard moderately vascularized mass with adherent, thickened and multiple cystic like dura. Histological examination was reported as microcystic meningioma. We discuss the incidence, theories of origin, classification and radiological appearance of intraosseous meningioma.

CONCLUSION :

In spite of its rarity, differential diagnosis of intraosseous meningioma should be taken in consideration of skull lesion.

PS-17

SURVIVAL ANALYSIS AND FUNCTIONAL OUTCOME AT 6 MONTHS IN SURGICAL TREATMENT OF SPONTANEOUS SUPRATENTORAIL INTRACEREBRAL HEMORRHAGE (ICH)

Abdul Rahman IG, J Abdullah, John Tharakan, Zamzuri I, Sani S, Mohamed Saufi A, Nasser AW, Mazira MG, Nur-Leem Murshid, Faridah AR.

Department of Neurosciences, Department of Chemical Pathology, School of Medical Sciences, Universiti Sains Malaysia, 16150 Kubang Kerian, Kelantan.

OBJECTIVE :

A prospective cohort study, was conducted over a 13 month period, from February 2004 which consisted of studying hematoma evacuation with intracranial pressure monitoring and microdialysis.

MATERIALS AND METHODS :

Cerebral autoregulation using transcranial Doppler sonography and the thigh cuff technique was performed in all subjects on admission to the ICU. Applanation tonometry assessing the central systemic haemodynamic by measuring the aortic augmentation index using the Pulse Wave dichotomized Glasgow Outcome Scale (GOS).

RESULTS :

36 patients were recruited into the study of whom 19 were males and 17 were females with ages ranging from 39 to 76 years and a mean age of 58.6 (± 10.1) years. 27(75%) patients had Glasgow Coma Score (GCS) between 5 to 8 on admission and 9 (25%) were admitted with GCS of 9 on admission. The survival time ranged from 2 to 180 days with a mean survival time of 105.36 \pm 76.4 days. At 6 months, 20 (55.6%) patients had GOS 1, 1(2.8%) patient had GOS II, 10 (27.7%) patients had GOS III and 5 (13.9%) had GOS of IV. None of the patients in this study had GOS of V. The mortality rate 6 months was 55%, 86% had a poor or unfavorable outcome (GOS I-III) and 14% had good or favorable outcome (GOS IV-V). APOE epsilon 4 allele was not detected in all patients. A normal cerebral autoregulation was found in 27 (75%) patients. In 7 patients where aortic augmentation index (AI) was measured, a high AI was observed. In the univariate analysis for the functional outcome shift ($p=0.009$), regional cortical cerebral blood flow (rCoBF), ($p=0.034$) and tracheostomy status ($p=0.047$). The univariate analysis for survival function revealed that the rCoBF ($p=0.0143$), midline shift ($p=0.0064$) and papillary status on admission ($p=0.0016$) were significant predictors of survival function.

CONCLUSION :

Pupillary status was sole significant predictor of survival function (HR=2.298; 95% CI 1.168-4.523; $p=0.016$ in multivariate analysis. Patients with midline shift >5 mm has almost 21 times higher chances of being associated with poor outcome (GOS I-III) and patients with abnormal pupil on admission has 2.3 times risk of mortality compared to patients with papillary reaction on admission.

PS-18

***COMPLEX FRACTURES INVOLVING THE UPPER CERVICAL SPINE:
A CASE REPORT***

Badrisyah I, Abdul Rahman IG, Saufi A, J Abdullah, Hillol KP.

**Department of Neurosciences, School of Medical Sciences, Universiti Sains
Malaysia, Health Campus, 16150 Kota Bharu, Kelantan.**

INTRODUCTION :

Recent attention has focused on fractures of the craniocervical junction (CCJ) in severe head injury (HI) resulting from high-energy accidents. Treatment algorithms based on the classification of fractures at the CCJ have been developed. However, some complex fractures involving the CCJ and upper cervical spine defy attempts at categorisation with consequent unclear treatment protocol. We report a case of complex fractures involving the upper cervical spine.

CASE REPORT :

A 54-year-old man was involved in a road traffic accident followed by loss of consciousness. Admission Glasgow Coma Scale (GCS) was E1V1M4. He was intubated and ventilated. Computed tomography of his brain and upper cervical spine demonstrated subarachnoid haemorrhage with moderate hydrocephalus, comminuted fracture of left occipital condyle, fracture of left transverse process of atlas, fracture of right C2 pedicle with contralateral vertical fracture of C2 body extending into the superior endplate of C3 vertebra with concomitant fracture of right C3 lamina. The Type I occipital condyle fracture and the transverse C1 fracture were considered stable. The injuries at C2-C3 were akin to a 'decompressive laminectomy' with the outward displacement of their left lateral pillars, though the lateral masses at these levels per se were not involved. The surgical options included direct osteosynthesis of C2-C3 by posterior arthrodesis, which would have involved a longer construct or anterior short segment arthrodesis from C2-C4, which could stabilise the left C2-C3 lateral columns. The presence of denuded left vertebral artery between C1-3, as a consequence of the fractures was a relative contraindication to posterior arthrodesis. The patient was operated by the transcervical approach. Disc disruption was observed at C2-C3 and C3-C4. The C3 vertebra was unduly mobile suggesting instability. Anterior cervical discectomies were performed at these two levels with insertion of Titanium mesh cages (6mm height, 10mm diameter), loaded with cancellous bone. Anterior cervical plating was carried out from C2-C4 using Orion plate (44mm) with 17mm screws at C2 and 19mm screws at C4 level. A 15mm anchoring screw was inserted into the C3 vertebral body in the midline.

CONCLUSION :

We conclude that when faced with a constellation of fractures at the upper cervical spine the treating surgeon should analyse the major fractures causing instability and choose the shortest segment for arthrodesis in order to achieve adequate stability.

PS-19

PRIMARY XANTHOMA WITH NECROBIOSIS OF THE DURA: A CASE REPORT

Badrisyah I, Nasser AW, Zamzuri I, Hillol KP, J Abdullah*, Shafie A, Roshan Perveen, Nor Hayati Ot*****

Department of Neurosciences*, Department of Radiology, Department of Pathology***, School of Medical Sciences, Universiti Sains Malaysia.**

OBJECTIVE AND IMPORTANCE :

Primary xanthoma of the central nervous system is an extremely rare condition. Xanthomatous tumours of the central nervous system are occasionally associated with diseases such as Hand-Schuler-Christian disease, malignant fibrous histiocytoma, hyperlipidemia, and a complication of metabolic or storage disorders. We present a case of dura xanthoma with necrobiosis which is not associated with systemic or metabolic disease.

CASE REPORT :

A 17-year old male presented with focal seizures affecting right upper limb for 2 years which progressed to generalised seizures associated with right hemiparesis and motor dysphasia for 2 months. Magnetic resonance imaging of his brain revealed a dura-based mass lesion at left parietal area. The tumour was excised by using a neuroimage-guided system through a craniotomy. Intraoperatively, the affected dura was noted very thick and adherent to the brain with rough surface and yellowish in colour with a part of it was within the precentral sulcus. Histopathology analysis demonstrated that the lesion composed of areas of granulomatous reaction with necrobiosis without evidence of multinucleated giant cells presence. The lesion was reported as a xanthoma with necrobiosis. After the surgery, the right hemiplegia and aphasia were improved gradually, and the seizure was well-controlled.

CONCLUSION :

Primary xanthoma with necrobiosis is a very rare disease affecting the central nervous system.

PS-20

ROBOTIC NEUROSURGERY: AN ACTIVE VISION GUIDED ROBOTIC ARM FOR BONE DRILLING AND ENDOSCOPIC MANEUVERING

Saufi A*, J Abdullah*, Abdullah MZ, Ayob MN**, Idris B***

School of Medical Sciences, School of Health Sciences, Universiti Sains Malaysia, Health Campus, 16150 Kubang Kerian, Kelantan **School of Electrical and Electronic, USM, Transkerian, Nibong Tebal, Penang

PURPOSE :

Surgical robot has been appearing in the operating room over the past decade. Robots are “extending human capabilities” and not to replace human surgeon. Among the advantages of robot is good geometric accuracy, stable and untiring. The aims of the study are *to* assess the capability and accuracy of existing industrial robot performing dynamic surgical maneuver specifically bone drilling and endoscope procedure on artificial skull models.

METHODS :

Materials used in this study are artificial skull models, Midas Rex Bone Drill, endoscope and Cobra 600 Adept Scara Robot. The two basic maneuvers tested are bone drilling and endoscopic procedure. First the robot will be trained to recognize the target on skull models. The target images are captured by the camera and send the digital images to the controller. The digital images will be analyzed and interpreted. Subsequently, the robotic arm will be simulated and instructed to the target areas and perform the two maneuvers. The skull models are placed at different positions, similar position used in real operation.

RESULTS :

At supine with head in neutral position, the accuracy is 1.0mm with repetition ranges from 0.04mm to 0.17mm. In lateral position either right or left, the accuracy is 1.0mm and repetition of 0.03mm to 0.1mm. In sitting position, the accuracy ranges from 0.1mm to 1mm with repetition of 0.07mm to 0.92mm and finally in prone position, the accuracy is 1.0mm with repetition of 0.08mm to 0.3mm.

CONCLUSION :

Overall, the robot is able to perform both of the surgical tasks. However, this is limited to targets that are pendicular to the robotic arm. Given, the present robot has only 4 degree of freedom (DOF), the accuracy can be enhanced by adding more DOF, good quality camera and illumination.

PS-21

THE IMPACT OF EPILEPSY SURGERY ON THE QUALITY OF LIFE OF PATIENTS : PRELIMINARY RESULTS

Maria S P, Rahida MS John Tharakan, J Abdullah*, Sani S

Department of Neurosciences, School of Medical Sciences, Universiti Sains Malaysia, Health Campus, 16150 Kota Bharu, Kelantan

PURPOSE :

To determine the effect of surgery on the quality of life of patients diagnosed with drug-resistant epilepsy.

METHODS :

Subjects (19-25 years) were 3 male and 2 female patients with refractory epilepsy, who underwent surgery. Quality of life was assessed using the Quality of Life in Epilepsy-31 (QOLIE-31) questionnaire, a Likert-type scale, using the response set: How did you feel the past 4 weeks? The questionnaire was administered pre- and 1 year post-surgery. The QOLIE-31 has been translated into Bahasa Malaysia and its psychometric characteristics are currently being assessed. A 1-way ANOVA with repeated measures and a Bonferroni-corrected alpha was used to determine the differences in selected subscales: seizure worry, energy/fatigue, cognitive and social functioning for normally distributed data. The L-statistic was employed for non-normal, skewed and/or kurtotic data.

RESULTS :

There were no differences over time in seizure worry (pre-surgery: 45.98±25.41, post-surgery: 49.88±29.42, p=0.857, $\eta^2=0.009$), energy/fatigue (pre-surgery: 59.00±9.62, post-surgery: 65.00±14.14, p=0.541, $\eta^2=0.100$), cognitive functioning (pre-surgery: 61.19±23.60, post-surgery: 63.27±28.78, p=0.813, $\eta^2=0.016$) and social functioning (pre-surgery: 47.40±15.88, post-surgery: 70.50±24.11, $L_{1,4}<0.001$, p>0.900, $\eta^2<0.001$).

CONCLUSIONS :

Although improvements occurred in quality of life markers, the small sample size was prohibitive in terms of statistical differences over time. Regardless of the small sample size, possible explanations offered for the discrepancy between the results of this study and what was reported in the literature include differences in age, post-assessment period, and treatment of the data.

PS-22

A MULTIMODEL APPROACH TO THE TREATMENT OF CONGENITAL PSEUDOARTHROSIS (CPT) IN HUSM

Sulaiman AR, Faisham WI, Nordin S, Halim AS, Zulmi W

Department of Orthopaedics, School of Medical Sciences, Universiti Sains Malaysia, Kelantan, Malaysia.

INTRODUCTION :

CPT is rare problem and difficult to treat. The most accepted treatment methods are complete excision of disease tissue followed by either intramedullary nail (IMN), vascularized fibular graft (VFG) or ilizarov bone transport.

METHODOLOGY :

We review result of our multimodel treatment approach to this difficult problem. VFG was used when the bone gap following resection was more than 4 cm while ilizarov was used when the gap was less than 4 cm. In the VFG group, intramedullary nail was inserted after the fibula hypertrophy. IMN was inserted in the beginning of reconstruction in the ilizarov group

RESULT :

There were 3 patients treated with VFG and 2 patients treated with ilizarov method. All patients had united tibia, with one awaiting for intramedullary nail. There were no evidence of neural tissue in the excised specimen from all patients. Evidence of Neurofibromatosis Type I were found in all patients.

CONCLUSION :

IMN together with VFG or ilizarov as primary treatment of CPT is a safe alternative treatment method to this difficult problem.

PS-23

A REVIEW OF 2408 CHILDREN'S FRACTURES IN SINGAPORE

Sulaiman AR* Michael S**

***Department of Orthopaedics, School of Medical Sciences, University Sains Malaysia, Health Campus, 16150 Kota Bharu, Kelantan, Malaysia **Department of Orthopaedics Surgery, Kandang Kerbau Women's and Children's Hospital, Singapore**

PURPOS :

To determine the clinical presentation of children with fractures in Singapore.

METHODS :

This retrospective study reviewed 2408 fractures in 2041 children admitted to Kandang Kerbau Woman and Children Hospital (KKWCH), Singapore.

RESULTS :

The fractures increased in frequency from age 0 to 4 years, plateaued between 5 to 12 years and decreased in older children. Home injuries were the commonest cause of fractures in children younger than 4 years of age while playground injuries were the commonest cause in children between 4 to 8 years and sporting activities were the main causes in children older than 8 years old. Monkey bar injuries represented 56.7% of fractures from the playground, while cycling (28.5%) and soccer (25.2%) were the leading causes of fractures in sporting injuries. Road traffic accidents posed only 2.9% of the causes; however presented with more severe fractures. Seventy-five percent of these patients were 8 years or older and most of them were pedestrian (73.3%).

CONCLUSION :

Prevention strategies to reduce these injuries must include the home environment, playground and road safety.

PS-24

OCULAR MANIFESTATIONS OF STEVEN JOHNSON SYNDROME - A 4-YEAR RETROSPECTIVE STUDY IN HUSM

Wahid AW, Amelah M, Zunaina E, Bakiah S

Department of Ophthalmology, School of Medical Sciences, Universiti Sains Malaysia 16150 Kubang Kerian, Kelantan, Malaysia

PURPOSE :

To describe the ocular manifestations of Steven Johnson Syndrome (SJS) in Hospital USM.

METHOD :

A retrospective review of medical records of all patients with a diagnosis of SJS associated with ocular presentation from Nov 2001 to Nov 2005 in Hospital USM was conducted. Patient demographic features, causative agent and ocular manifestations were analyzed.

RESULTS :

A total of 12 patients with a diagnosis of SJS associated with ocular presentation were reviewed. Anti-epileptic drugs (5 cases) and antibiotics (4 cases) represented the most common causative agents. Of those cases, 9 patients were male. Six patients found in the age group 5 to 20 years old. The most common presenting ocular features of SJS included mucopurulent discharge (10 patients), conjunctival membrane (9 patients), and foreign body sensation (7 patients). Overall, 8 of the 12 patients with acute ocular presentations were followed by ocular sequelae, mostly keratopathy (8 patients) and dry eye (6 patients). Two of them were associated with significant visual loss.

CONCLUSION :

Although Steven Johnson Syndrome is a rare condition, the ocular sequelae can cause significant visual disability, which may be permanent.

PS-25

RECONSTRUCTION OF ORBITAL FLOOR FRACTURE IN HUSM

Wahid AW*, Amelah MAK*, Omar I*, Bakiah S*, Noor Hayati AR, Zunaina E****

***Department of Ophthalmology, School of Medical Sciences, Health Campus, Universiti Sains Malaysia, 16150 Kota Bharu, Kelantan **Oral Maxillo-facial Unit, School of Dental Sciences, Universiti Sains Malaysia, Health Campus, 16150 Kota Bharu, Kelantan**

PURPOSE :

To determine the clinical features and risk factors of orbital floor fracture and the outcome of orbital floor reconstruction in Hospital USM, Kelantan.

METHOD :

A five-year retrospective review of orbital fractures undergoing reconstruction surgery from 1 January 2001 until 31 December 2005 was carried out. All cases were evaluated by ophthalmologist and maxillo-facial surgeon before surgery. All cases were followed up at least for three months.

RESULTS :

Eighty-six records were reviewed, from which 55 cases involved orbital floor fracture. Forty-five patients were male; the mean age was 25.7 ± 12.8 years. The most common cause was motor vehicle accident 52 (94.5%). The main clinical features were diplopia 23.6%, enophthalmos 21.8%, nasal bleeding 10.9% and periorbital ecchymoses 9.1%. Among the most common ocular findings were traumatic optic neuropathy 6 (10.9%) and retinal edema or hemorrhage 9 (16.4%). Thirty-five (63.6%) had undergone orbital floor reconstruction within two weeks of presentation and 11 (20.0%) within two weeks to one month. The majority of surgery was done via a blepharoplasty incision and 33 (60.0%) had graft reconstruction using autograft 20 (36.4%), allograft 4 (7.3%) and bioactive materials 15 (27.3%). There were no complications of orbital infection or hemorrhage or graft extrusion noted.

CONCLUSION :

Motor vehicle accident is a major problem causing significant morbidity in particular to orbital fractures. Orbital floor repair using a graft is often useful and a safe surgery to preserve ocular motility and alleviate diplopia.

PS-26

BILATERAL RENAL ARTERIOVENOUS MALFORMATION

Radhiana H, Mohd Shafie A, Mohd Ezane Aziz, Md Ariff Abbas*

***Radiology Department, School of Medical Sciences, Universiti Sains Malaysia, 16150, Kubang Kerian, Kelantan.**

INTRODUCTION :

Bilateral renal arteriovenous malformation are rare. Embolization is the currently preferred choice of intervention with high successful rate and significant reduction of morbidity. This case illustrate successful treatment of renal arteriovenous malformation with percutaneous embolization in our centre.

CASE REPORT :

45 years old Malay lady with back ache and persistent hematuria of one year duration. No history of hypertension or cardiac failure. Presence of red blood cells in urine, other blood investigations are normal. Screening for connective tissue disease are negative. Ultrasound shows prominent vessels of right pelvicalyceal system. CT scan shown multiple rounded enhancing tubular structure similar to vessels in both kidneys with early enhancement of renal veins (during arterial phase). Angiogram revealed bilateral renal arteriovenous malformation. Embolization was performed and total occlusion of the arteriovenous malformation achieved.

CONCLUSION :

Arteriovenous malformation of the kidneys are rare. Its estimated prevalence is less than 0.04%. Bell (1938) reviewed 30,000 consecutive autopsies and no renal arteriovenous malformation found. Bilateral involvement is even rarer. A review of 49 cases of renal AVM reveals that most are found in women and in the right kidney. Clinical presentation depends on angiographic appearance of the aneurysm. The cirroid type is characterized by a high incidence of gross hematuria on presentation and the aneurysmal type is characterized by frequent occurrence of cardiovascular signs and symptoms. Colour duplex ultrasound shows the vascular nature of cystic mass within the kidneys. In CT scan, hallmark of these anomalies is visualization of IVC within arteriogram phase. Angiogram allows visualization numerous small supplying vessels with fistulous channels and provide access for simultaneous treatment. The goal of treatment is maximal preservation of functioning renal parenchyma and eradication of symptoms and hemodynamic effect associated with the abnormality. In the past, partial or total nephrectomy with arterial reconstructive procedures have been the most common method of treating symptomatic arteriovenous malformation. Embolization is currently the preferred intervention and shown promising result with significant reduction of morbidity compared to surgery.

PS-27

ATLANTO-AXIAL OSTEOMYELITIS

**Radhiana Hassan, Win Mar@Salmah J, Nik Munirah Nik Mahdi,
Mohd Ezane Aziz.**

**Radiology Department, School of Medical Sciences, Universiti Sains Malaysia,
16150, Kubang Kerian, Kelantan.**

INTRODUCTION :

Vertebral osteomyelitis is uncommon and involvement of C1 and C2 is even rarer. This case illustrate the difficulty in diagnosing this condition due to its rarity and vague initial signs and symptoms.

CASE REPORT :

72 years old Malay lady with medical history of hypertension and chronic left otitis externa. She presented with sudden episode of left hemiplegia. On examination GCS 15/15, Blood pressure is 142/74 mmHg. Muscle power is 0/5(right upper limb) and 1/5(right lower limb). Blood investigations shows patient was slightly anemic with normal TWBC. Initial diagnosis of CVA was made. Later, she complaint of fever, unable to turn her head and dysphagia. Cervical radiograph shows subluxation of C1-C2 with osteoporotic changes. CT scan reveals destruction of C1 and C2. MRI shows infective spondylitis with anterior subligamentous, prevertebral and retropharyngeal collection HPE shows mixed acute and chronic inflammatory cells infiltrate. Stain for AFB is negative. C&S from this specimen shown actinobacter species with no evidence of TB. C1-C2 decompression via intra oral approach was done. Patient succumb to death due to sepsis 2 months later in ICU.

CONCLUSION:

Vertebral osteomyelitis is uncommon, with an incidence of 1 case per 100,000-250,000 population per year. Involvement of cervical vertebrae is even rarer. Most cases are due to haematogenous spread of pyogenic micro-organisms from a distant infective source. Because of its rarity and vague initial signs and symptoms, diagnosis is often delayed. Back or neck pain is the most common symptom and neurologic signs are not present until late in the disease course. Only about half of patients are febrile. Leukocytosis, is often absent or minimal in patients with chronic pyogenic vertebral osteomyelitis. Plain radiograph only shows findings after 2-4 weeks. CT findings include hypodensity at the infected disks, lytic fragmentation of the involved bone, gas within an involved vertebra, and decreased density of adjacent vertebrae and nearby soft tissues. MRI is complementary to CT scan. Radionuclide scan is more sensitive and become positive long before plain film changes are evident.

PS-28

CONJUNCTIVAL CALCINOSIS – A RARE PRESENTATION OF HYPERCALCAEMIA

Norlaili M*, Rohana AR*, Nik Azlan NZ*, Shatriah I, Bakiah S****

***Eye Clinic, Hospital Raja Perempuan Zainab II, 15150 Kota Bharu, Kelantan, Malaysia **Department of Ophthalmology, School of Medical Sciences, USM, Health Campus, 16150 Kota Bharu, Kelantan, Malaysia**

INTRODUCTION :

To describe a case of calcium deposits in the conjunctiva in a hyperparathyroidism patient

CASE REPORT :

A 35-year old male who was a known case of hyperparathyroidism for 10 years, underwent parathyroidectomy 3 years ago and was diagnosed as end stage renal failure since 1 year ago. He complained of foreign body sensation and redness of both eyes for one month. Ocular examination revealed 6/6 vision with multiple yellowish-white deposits in bulbar and palpebral conjunctivae sparing the limbal region in both eyes. It was associated with generalized conjunctival congestion. The conjunctival biopsy demonstrated multiple foci of calcium deposits in the subepithelial stroma. His serum calcium level was > 40 mmol. He was treated with topical steroid and lubricants. His eyes were less congested and comfortable with the above treatment though the deposits persisted.

CONCLUSION :

Conjunctival calcinosis is an uncommon presentation of calcinosis yet can be very disturbing.

PS-29

INTRAOPERATIVE EXTRACORPOREAL IRRADIATION AS AN ALTERNATIVE IN LIMB SPARING SURGERY IN A CASE OF PELVIC OSTEOSARCOMA – A CASE REPORT

Nawaz H, Faisham W, Zulmi W, Norazman MZ

Orthopaedic Oncology and Reconstructive Unit , Dept of Orthopaedics , School of Medical Sciences , Universiti Sains Malaysia, Kubang Kerian , Kelantan.

Pelvic osteosarcoma is a rare and difficult disease in which limb sparing surgery is an alternative choice of treatment in very selected cases. However in majority of the cases the bone defects after the wide resection of the cancerous bone are replaced by either allografts or custom made endoprosthesis . Another promising and good alternative but challenging technique is by using autogenous or the diseased bone itself after undergoing extracorporeal irradiation (ECI) intraoperatively . We would like to report a case of a 24 years old lady with osteosarcoma of the left pelvis whom underwent resection , ECI and reconstruction in our center.

Keywords : extracorporeal irradiation , limb sparing surgery , osteosarcoma

PS-30

PRIMITIVE NEUROECTODERMAL TUMOR OF THE ORBIT: A CASE REPORT

Azlyn Azwa J*, Ezanee M*, Md Salzihan MS, Liza-Sharmini AT***

***Department Of Ophthalmology, **Department Of Pathology, School of Medical Sciences, Health Campus, Universiti Sains Malaysia, 16150 Kubang Kerian, Kelantan**

INTRODUCTION :

Primitive neuroectodermal tumor (PNET) of the orbit is an extremely rare malignant tumor especially in adult. It is a soft tissue sarcoma classically described under small cell tumors.

CASE REPORT :

We described a rare case of a PNET of the orbit in a 27-year old man. He presented with painful total loss of vision of right eye for four months duration. It was associated with proptosis, discharge and opacity of the right eye and also generalized headache. On examinations, there was proptosis of the right eye with severely chemotic conjunctiva and lagophthalmos. Ocular movements were totally absent. The anterior chamber showed an old self-sealed cornea perforation. The fellow eye was perfectly normal and systemic examination showed no neurological deficit or any sign of thyrotoxicosis. Magnetic resonance imaging findings suggestive of aggressive soft tissue tumor of the right orbit evidence by a heterogenous mass arising from the right orbit expanding outward measuring 76 x 44 x 42 mm. The mass extended into the optic canal and involved all the extraocular muscles and the ethmoidal air sinus. However the chiasma was spared. Biopsy from the temporal conjunctiva and histopathological examinations confirmed the diagnosis of PNET. He was then subjected for serial chemotherapy and showed marked improvement and reduction of his proptosis.

CONCLUSION :

PNET especially from the head and neck area is extremely rare, but it responds well to chemotherapy.

PS-31

SUPERIOR OPHTHALMIC VEIN THROMBOSIS SECONDARY TO FURUNCULOSIS

Rohana AR, Norlaili M, Rosli K, Zulkifli AG, Bakiah S, Shatriah I

**Eye Clinic, Hospital Raja Perempuan Zainab II, Kota Bharu, Kelantan, Malaysia
Department of Ophthalmology, School of Medical Sciences, Universiti Sains
Malaysia, Kubang Kerian, Kelantan, Malaysia**

INTRODUCTION :

To report a rare cause of superior ophthalmic vein thrombosis due to furunculosis

CASE REPORT :

A 16-year old Malay girl who initially presented with history of painful acne-like lesion at tip of her nose for 4 days duration. 3 days later she progressively developed bilateral orbital swelling with fever. On examination, she was noted to develop axial proptosis and restriction of ocular motility in both eyes. The visual acuity was good in both eyes. A small pustular lesion with indurated base was seen at the tip of her nose. An urgent CT-scan of brain and orbits revealed bilateral orbital infection with right superior ophthalmic vein thrombosis. There were also evidence of thrombophlebitis in the right cavernous sinus and left superior ophthalmic vein. She was treated with intravenous heparin and antibiotics. Her condition improved subsequently and was maintained on oral warfarin.

CONCLUSION :

Furunculosis is a rare cause giving rise to superior ophthalmic vein thrombosis. A prompt diagnosis and management is crucial to save life and vision.

PS-32

BILIARY CYSTADENOMA - A CASE REPORT

Juhara H, Noreen Norfaraheen LA, Latifah MB

**Department of Radiology, School of Medical Sciences, Universiti Sains Malaysia,
Health Campus, 16150 Kota Bharu, Kelantan**

INTRODUCTION :

Biliary cystadenoma is a rare multilocular tumour of the liver derived from the biliary epithelium. The incidence is less than 0.05% of intrahepatic non-parasitic cystic disease. **CASE REPORT:** A 42 year old lady presented with one month history of epigastric mass. The mass gradually increased in size and ultrasound and computed tomography examinations confirmed the lesion at segment 4 of the liver. Aspiration was performed and there was recurrence. Histological examination was inconclusive. Subsequently, she underwent marsupialization and deroofting. The histopathology confirmed biliary cystadenoma.

CONCLUSION :

The difficulties and challenges in making the diagnosis are highlighted.

PS-33

LIVER CYST IN PREGNANCY

Adzlina J, Che Anuar CY, Nik Ahmad Zuky N L

Department of Obstetric and Gynaecology, School of Medical Sciences, Universiti Sains Malaysia Health Campus, 16150 Kubang Kerian, Kelantan.

INTRODUCTION :

The incidence of liver cyst in pregnancy is rare.

CASE REPORT :

We report a case of a 37 year old lady in her eighth pregnancy who presented with a huge hepatomegaly when she was 29 weeks period of gestation. She does not however have any symptoms and signs of liver disease despite the hepatomegaly. Liver enzymes were all within normal range and the infectious screening was negative. Radiological examination revealed multiple liver cysts. Growth of the baby and the progress of her pregnancy were not affected by the condition. She subsequently had an emergency lower segment caesarean section for transverse lie and the cystostomy was performed at the same setting.

CONCLUSION :

The presence of liver cyst is a challenge in the diagnosis and successful delivery

PS-34

BULLOUS KERATOPATHY SECONDARY TO CORNEAL BEE STING

Hah Y K*, Ang EL, Zunaina E*, Ng GL****

***Department of Ophthalmology, School of Medical Sciences, Health Campus, Universiti Sains Malaysia, 16150 Kubang Kerian, Kelantan, Malaysia. **Eye Clinic, Hospital Pulau Pinang, Geargetown, Pulau Pinang, Malaysia.**

INTRODUCTION :

Bee sting is known to cause allergic reaction, which sometimes might be life-threatening. Ocular involvement is rather rare. We reported an uncommon case of bee sting with retained stinger in the eye.

CASE REPORT :

A 50-year-old Malay man was presented with the history of a bee entering his right eye while riding motorcycle. He was suffered from eye pain and blurred vision immediately after the injury. His right eye showed oedema of the upper and lower eyelids, conjunctival hyperaemia and chemosis, diffuse cornea oedema and endothelial striae with anterior chamber reaction. A retained barbed stinger was noted at the centre of the cornea and was successfully removed under local anaesthesia. The clinical triad of penetrating, immunological and toxic reactions to corneal bee sting were present in this patient. He was treated with local application of corticosteroids and antibiotics as well as systemic antihistamines. A gradual clearing of the corneal oedema with improvement of visual acuity was seen after three months.

CONCLUSION :

Although rare, bee sting to the cornea can cause significant visual disability which may be permanent.

PS-35

RECONSTRUCTION OF FOREHEAD DEFECT WITH BILATERAL SUBCUTANEOUS V-Y ADVANCEMENT FLAP

Dorai AA, Noran IS, Halim AS

Reconstructive Sciences Unit, School of Medical Sciences, Universiti Sains Malaysia, 16150 Kubang Kerian, Kelantan, Malaysia.

INTRODUCTION :

Reconstruction of forehead defects is a challenge. The goal of repair is to be able to close a full thickness wound, in a single stage with minimal donor side morbidity, good color and texture matching. A great variety of surgical procedures to repair forehead defects have evolved over the last century. These include skin grafts to flaps, forehead flaps, periosteal flaps, island scalp flaps, temporofascial flaps, to free flaps such as omentum flaps, groin flap, radial forearm flaps, latissimus dorsi flaps and tissue expansion.

CASE REPORT :

A 41 year old Malay engineer was involved in a motor vehicle accident. The patient sustained a large, jagged laceration wound on the right side of the forehead. Wound debridement and toilet and suturing was done one day after the injury. A week later, the patient was referred to our institution with a 6 x 5.5 cm defect on the forehead. The frontal bone was exposed, measuring 4 x 3 cm. The wound edges were debrided and the outer cortex of the exposed frontal bone was burred. Reconstruction of the defect was performed by raising flaps from either side of the forehead. The vascular basis of the flap were the right superficial temporal branches and left supratrochlear and supraorbital vessels. The cutaneous flap was elevated and advanced medially to cover the exposed bone. Primary closure of the donor site was done using the V-Y advancement technique. After 6 months post surgery the oedema subsided and the initial trap door deformity markedly reduced. The contour of the forehead was aesthetically acceptable.

CONCLUSION :

The Bilateral Subcutaneous V-Y advancement local flap is the simple alternative method of reconstruction for a small forehead defect. It gives an excellent cosmetic result, good color match, texture, no violation of hairline, minimal donor site morbidity and preserving the forehead contour.

PS-36

INFLUENCE OF HONEY AS A WOUND DRESSING: A PRELIMINARY STUDY

***Wan Ratmaazila WM, *Halim AS, **Jaafar H, *Siti Nazmin S.*Fadillah A.**

*** Reconstructive Sciences Unit **Department of Pathology. School of Medical Sciences. Universiti Sains Malaysia. 16150 Kubang Kerian, Kelantan. Malaysia.**

PURPOSE :

Many studies have demonstrated that honey antibacterial activity in vitro and Clinical of studies has shown that potential; beneficial wound healing properties which include application of honey to infected cutaneous wounds is capable of clearing infection from wound and improving tissue healing. This study is designed to determine the histological differences between the two treatment group on rats. The objective of this study was to evaluate the influence of pure honey as a dressing on the wounds in comparison to the saline dressing animal model.

METHOD :

Six male Sprague Dawley rats were divided into two groups and wounds (1.5x 1.5) cm were created and either dressed with pure honey or saline dressing as a control group. The wounds were excised and the rats were sacrificed on day 7, 14, 21 for histological evaluation which include the formation of granulation tissue and in inflammation.

RESULT :

The entire control group showed the same size of wound (1.4x 1.5) cm on day 7, 14 and 21. At day 7, the size of wound in honey group is (0.9x1.3) cm, at day 14, the wound size is (1.0 x 1.3) cm and at day 21 the wound size of honey group is (0.8x 1.0) cm. Microscopically, wound treated honey had better granulation tissue formation and less inflammation in comparison to the control group.

CONCLUSION :

Wound dressed with pure honey has better granulation tissue formation and less inflammation that will improve tissue healing.

PS-37

***LARGE GANGLION CYSTS CAUSING COMPRESSION NEUROPATHIES;
A REPORT OF THREE CASES***

Nor Azman MZ, Zulmi W, Faisham WI

**Department of Orthopaedics, School of Medical Sciences, Universiti Sains Malaysia,
Health Campus, 16150 Kota Bharu, Kelantan**

INTRODUCTION :

Ganglion cysts are common benign lesions occurring around the wrist joints and are usually asymptomatic. Large ganglion cysts causing compression neuropathies are rare and if they occur it is usually in an unusual location. A simple surgical excision of the cyst is usually curative and recurrence is rare. We report three cases of such ganglia.

CASE REPORTS :

Two patients presented with large ganglia around the neck of fibula compressing the common peroneal nerve causing foot drop in one of them and big toe drop in another. Another patient had a ganglion in the arm causing numbness along the ulnar nerve distribution. Surgical excision of the lesions was done in all three patients and they all recovered fully within six weeks with no recurrence on a minimum follow up of one year.

CONCLUSION :

A simple surgical excision of the cyst is usually curative and recurrence is rare

PS-38

IS ANTISPERM ANTIBODIES TEST NECESSARY FOR MALE INFERTILITY?

Shah RJN*, Adibah I*, Zainal AH, Wan Z**, Gavin YKW***

***Department of Obstetrics and Gynecology, School of Medical Sciences, Universiti Sains Malaysia, 16150 Kubang Kerian, Kelantan, Malaysia **Department of Obstetrics and Gynaecology, Hospital Raja Perempuan Zainab II, 15150 Kota Bharu. Kelantan.**

PURPOSE :

To determine the local prevalence of antisperm antibodies among men attending the infertility clinics in Hospital USM and Hospital Kota Bharu.

METHODS :

This is a prospective study involving 180 men receiving treatment at the infertility clinics in Hospital USM and Hospital Kota Bharu between 1 January 2004 and 30 October 2004. Patients are selected based on their record of unexplained infertility. These patients have been on follow up from 1 January 2002 till 30 October 2004. Upon consent and recruitment, a sample of 3 mls of venous blood is taken from the right forearm. The blood is transported to the immunology laboratory in Hospital USM and processed to obtain a sample of serum. The serum is then pooled and later tested for the presence of antisperm antibody using the Anti- Spermatozoa- Antibody (ASA) ELISA tests (Pharmacia Diagnostics: Varelisa Sperm Antibodies)

RESULTS :

The prevalence of antisperm antibodies in this studied population is 6.1% (11 patients out of 180 patients). This is marginally lower than the reported incidence of 10-26% in other countries. Of all the parameters correlated with antisperm antibody, only genital trauma is significantly associated with antisperm antibody.

CONCLUSION :

The prevalence of antisperm antibodies among the subfertile male is low in this study. Therefore, routine screening is not encouraged as it is not cost effective. Corellation of antisperm antibody to genital trauma is significant and can be used as a marker for selective screening of men with antisperm antibody. The result may not be representative of the Malaysian population as it is a hospital based study. A larger scale study involving a few centres is required in order to obtain a national consensus.

PS-39

IS REPEATED BOLUSES OF HYDRALLAZINE EFFECTIVE IN HYPERTENSIVE CRISES IN PREGNANCY?

Ravindran J, Kathiravan**, Shah RJN*, Zaki NM***

***Department of Obstetrics and Gynecology, School of Medical Sciences, Universiti Sains Malaysia, 16150 Kubang Kerian, Kelantan, Malaysia**

****Hospital Seremban, Negeri Sembilan.**

PURPOSE :

To compare the effectiveness of administering intravenous hydralazine in repeated bolus fashion to intravenous hydrazine in continuous drip in stabilizing the blood pressure in hypertensive crises of pregnant mothers with pregnancy induced hypertension (PIH).

METHODS :

A single-blinded comparative prospective study was conducted at Hospital Seremban, Malaysia from October 2002 till August 2003 involving 69 pregnant mothers suffering from pregnancy induced hypertension with hypertensive crises. The inclusion criteria's were pregnant mothers with PIH with hypertensive crises admitted to the Pre-Eclampsia (PE) room for commencement of intravenous hydralazine to stabilize the blood pressure. Pregnant mothers with a diastolic blood pressure of more than 110mmHg, (taken twice, 15 minutes apart manually) with or without signs and symptoms of impending eclampsia requiring IV hydralazine to stabilize diastolic blood pressure to 90-95mmHg, were enrolled into the study. They were excluded if period of gestation was below 20 weeks, had any history of heart disease or failure or previous allergy to hydralazine.

RESULTS :

Both the groups were similar with respect to maternal age, parity, period of gestation, and their mean systolic and diastolic blood pressure upon admission to PE room (before treatment). Mothers receiving repeated bolus intravenous hydralazine stabilized their blood pressures much faster (mean 55.57±27.41 minutes) than the control arm (mean 227.35±37.36 minutes). The experimental arm also required less total cumulative dose of hydralazine (mean 10.62±1.98mg) compared to the control arm (mean 21.19±4.01mg) in stabilizing the blood pressure. There was no overshoot hypotension or any side effects of treatment in both the groups

CONCLUSION :

Both methods of administering intravenous hydralazine are equally safe, but it appears that repeated bolus dose of intravenous hydralazine is more effective than continuous drip in the management of hypertensive crises in pregnant mothers with PIH

PS-40

A COMPARATIVE STUDY OF MICROSCOPIC FEATURES OF ENAMEL AND DENTINAL CARIES UNDER CONFOCAL LASER SCANNING MICROSCOPY (CLSM) AND IMAGE ANALYZER

Aida Shafiza CA, Karima Akool MA, Rajan SI

School of Dental Sciences, Universiti Sains Malaysia, Health Campus, 16150 Kubang Kerian, Kelantan, Malaysia

PURPOSE :

Confocal Laser Scanning Microscope (CLSM) is a relatively new, non-destructive technique, which provides three-dimensional images by means of microscopic topography. Recently, CLSM has found potential applications in dental caries related studies, including investigation into the demineralization and remineralization processes. This study was designed to identify surface and subsurface microscopic changes in different carious lesions by using Confocal Laser Scanning Microscope (CLSM) and Image analyzer (light microscopy).

METHOD :

Thirty extracted carious posterior teeth (premolar and molar) were used in this study. The teeth were fixed, embedded and polymerized in plastic fixation medium. Thick sections were done (200mm) and the final thin sections (80mm) were made by grinding using sandpaper p1000.

RESULTS :

Various sections showed different extent of caries and underlying histopathological changes. Under Confocal, marked differences between control sound enamel and dentin, and carious area of the samples were observed which illustrated that a correlation existed between the zone of autofluorescence, demineralization and carious dentine. CLSM produced better images due to advanced confocal software which could be used to edit the images to enable the labeling of the different area of demineralization with different colour. In addition, it provided three-dimensional views for carious lesions which could be manipulated for topography function. Compared to CLSM, Image Analyzer only produce two-dimensional images but the images were of high quality which was further improved by using certain staining methods.

CONCLUSION :

This study demonstrates the possibility of using CLSM and Image Analyzer to study histopathological changes in teeth associated with caries and in the demineralization and remineralization studies.

PS-41

OCULAR TOXOPLASMOSIS : ATYPICAL PRESENTATION

Azlyn Azwa J, Wan Norliza WM, Ibrahim M

**Department Of Ophthalmology, School of Medical Sciences, Health Campus,
Universiti Sains Malaysia, 16150 Kubang Kerian, Kelantan**

INTRODUCTION :

Toxoplasmosis is due to infestation by an obligatory intracellular protozoan parasite called *Toxoplasma gondii*. Ocular involvement in acquired toxoplasmosis is extremely rare.

CASE REPORT :

We report herein a case of atypical presentation of ocular toxoplasmosis in a young immunocompromised patient who was just diagnosed as retroviral positive. A 22-year old man who was an active intravenous drug user presented with sudden onset of painless reduced vision of both eyes for one day duration. He claimed that his vision was good previously. He also complained of severe frontal headache 1 week prior to the reduced vision. However there were no other symptoms of increased intracranial pressure. Ocular examinations showed significant reduced vision with presence of cotton wool spot in the posterior pole of both eyes. Radiological imaging showed evidenced suggestive of multiple cerebritis secondary to toxoplasmosis. Anti toxoplasma gondii was started immediately and patient respond well.

CONCLUSION :

Immunocompromised patient might present with an atypical ocular presentation and the diagnosis might be challenging.

PS-42

***INTRA-ABDOMINAL DESMOPLASTIC SMALL ROUND CELL TUMOUR:
PRESENTATION OF FOUR CASES AND REVIEW OF LITERATURE***

Venkatesh RN*, Biswa MB, Syed Ejaz S**, Mutum SS***

Department of Pathology*, Department of Nuclear Medicine, Radiotherapy and Oncology School of Medical Sciences; Universiti Sains Malaysia, Health Campus, 16150 Kubang Kerian, Kelantan**

INTRODUCTION :

Desmoplastic small round cell tumour is a recently recognised entity first described in 1991. Since then about 200 cases have been reported in English literature mainly as case reports due to its rarity. These tumours are very aggressive and seen in young adults. The characteristic presentation is an abdominal mass with abdominal discomfort with or without pain. The other sites it can arise from include head and neck, paratesticular region brain and thoracic viscera.

CASE REPORT :

In this study we are reporting four cases, two of them occurring in males and the other two in females. The youngest was a girl aged 14 and the oldest was a 33-year-old male. All the four patients presented with mass per abdomen and vague intra abdominal pain of 2 to 3 months duration. Histopathological examination of the excision biopsy showed a malignant tumour composed of small cells arranged in well defined nests, sheets and islands separated by abundant desmoplastic stroma. These cells were positive for epithelial membrane antigen and vimentin. Based on these and other features diagnoses of desmoplastic small round cell tumour was made. Later, these patients were subjected to combination chemotherapy, because either the tumour was inoperable or there were evidence of metastasis. The chemotherapy regimen included cisplatin, ifosfamide, adriamycin and etoposide. Following chemotherapy two of them achieved good response but one of the patients progressed to the advanced stage of the disease and the other defaulted follow up.

CONCLUSION :

Desmoplastic small round cell tumour is an enigmatic disease whose biological behaviour, genetics and morphological characteristics are yet to be elucidated. The clinical presentation, behaviour and response rate to chemotherapy in this series of four patients will help us in understanding these rare tumours better.

PS-43

PREVALENCE OF OBSTRUCTIVE SLEEP APNOEA SYNDROME(OSAS) IN CHILDREN WITH ADENOTONSILLAR PATHOLOGY IN HUSM – A PILOT STUDY

Hazama M, Shamim AK, Dinsuhaimi S

Department of Otolaryngology, School of Medical Sciences, Universiti Sains Malaysia, Health Campus, 16150 Kota Bharu, Kelantan

PURPOSE :

To study the prevalence of OSAS in children with Adenotonsillar enlargement in HUSM and the association of adenoid and tonsillar pharyngeal ratio with severity of OSAS in HUSM.

METHODS :

This pilot study is a cross sectional study done from October 2003 to October 2004 in children age 1 to 17 years old in HUSM, Kubang Kerian. History of symptoms of OSAS were obtained from the parents and all subjects are subjected to a ENT physical examination, lateral soft tissue x-ray of nasopharynx and oropharynx and an overnight polysomnography. The Adenoids size was determine by measuring the adenoid to nasopharyngeal ratio and the tonsil size was determined by the tonsillar to pharyngeal ratio (T-P ratio) on the radiograph. The severity of OSAS was assessed using Apnea Index (AI) in the Polysomnography.

RESULTS :

A total of 12 males and 4 females with median age is 7 years were involved. The commonest symptoms are snoring, restless sleep and mouth breathing. 87.5% subjects had tonsillar enlargement. The median for TP ratio was 0.83. The median Adenoid ratio was 0.58 and the median for Apnea Index was 12.05. The clinical tonsil size did not associate with AI. The TP and Adenoid ratio also did not correlate with AI.

CONCLUSION :

The prevalence of OSAS among children with Adenotonsillar pathology is high. Symptoms of OSAS should be asked regularly to those children with Adenotonsillar pathology because certain symptoms of OSAS are under detected. It is important to recognized and treat the disease early.

PS-44

A STUDY ON PAIN MANAGEMENT FOR ACUTE ORTHOPAEDIC FRACTURE IN EMERGENCY DEPARTMENT, HOSPITAL UNIVERSITI SAINS MALAYSIA

Kamarul AB, Abu Yazid MN, Mohd Idzwan Z, Rashidi A.

Department of Emergency Medicine, School of Medical Sciences, Universiti Sains Malaysia, Health Campus, 16150 Kota Bharu, Kelantan

PURPOSE :

Pain is the most common chief complaint of patients presenting to Emergency Department (ED). What is surprising is the fact that emergency health care providers have not established themselves as champions in the treatment of acute pain. The aim of this study is to assess the pattern of analgesics use for managing fracture pain of extremities and clavicles for adult patients; and determine the association between type of fracture (upper limb vs lower limb) with adequacy of pain management.

METHODS :

An observational study was conducted from July to October 2005 in ED, Hospital Universiti Sains Malaysia (HUSM). Patients who fulfill the inclusion criteria were selected for the study. Paramedics in charged were the assistants; at the same time became the observer. The paramedic then completed the questionnaire before patients leaving the ED.

RESULTS :

42 patients were enrolled. 85.7% (n=36) were male and 14.3% were female with 97.6% Malays. Mean age is 29.6 years old. Only 4.76% (n=2) of doctors practice proper pain assessment. 71.4% (=30) patients were given analgesics. 10% of the patients did not achieve adequate pain relief. Mean Numeric Rating Scale (NRS) before leaving the ED was 3.88; with 14.3% and 33.3% were in severe pain and moderate pain respectively.

CONCLUSIONS :

There is statistically significant association of age with pain severity on arrival (p value=0.0015), however there is no statistically significant association between fracture sites and analgesics administration; no association between fracture sites and type of analgesic ; and no association between fracture sites with adequacy of pain relief.