

OS -1

PREVALENCE OF ORAL LESIONS AND DENTITION STATUS AMONG NON SMOKING DIABETES PATIENTS ATTENDING HUSM DIABETIC CLINIC

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Objective: To determine the prevalence of oral mucosal lesions and dentition status among non smoking diabetes patients attending the Diabetic Clinic at Hospital Universiti Sains Malaysia (HUSM).

Patients and Method: This cross sectional case-control study involved 300 diabetic case and 300 non-diabetic control subjects. Data was collected from November 2007 till March 2008. Demographic information, duration and type of diabetes, glycosylated hemoglobin values (HbAc), medical complications, history and current use of medication was obtained from medical records. Detail oral examination of the oral cavity was done based on international criteria and WHO codes. The number of remaining teeth and presence of dentures were also noted.

Results: There were more females in cases (67.7%) and controls (57.7%). Mean age in both groups was comparable. A higher percentage of subjects were in the 40-59 years age group. Most had type II diabetes (94.3%). About 42.3% had diabetes within the last five years followed by 35.5% who had diabetes between 5-10 years duration and 22.3% had diabetes for more than ten years. Most diabetic subjects were on oral treatment (64.3%) and had poor metabolic control (41.7%). About 10.7% had some form of diabetes complications. The most prevalent oral lesions among diabetics were fissured tongue (29%), denture stomatitis (13.7%), geographic tongue (3.3%) and frictional keratosis (3.0%). About one third of subjects in both groups use dentures. Diabetics have significantly higher prevalence of geographic tongue ($p=0.050$) and denture stomatitis ($p=0.026$). They have a lower mean number of remaining teeth compared to non-diabetics ($p<0.001$).

Discussion and Conclusion: Having less mean number of remaining teeth and a higher prevalence of oral lesions among diabetics is a worrying outcome. Thus diabetic patients need intensive dental care and attention to minimize the disease burden.

OS-2

MAXILLARY SWING AS AN ANTERIOR SKULL BASE APPROACH FOR NASOPHARYNGEAL TUMORS

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Introduction: The recurrent primary nasopharyngeal carcinoma (NPC) and angiofibroma (JNA) after first line modality of treatment may exhibit wide local extension. It may invade the lateral pharyngeal space and areas like infratemporal fossa or pterygopalatine fossa. A late presentation in clival chordoma makes it inaccessible for adequate surgical excision. The wide exposure of the nasopharynx and its vicinity is essential for surgical control of these tumors. An approach allowing adequate exposure in this situation can only ensure prevention of residual tissue and further recurrence in nasopharyngeal tumors.

Objective: To evaluate a surgical approach (anterolateral) to nasopharynx and paranasopharyngeal space that may provide an adequate exposure required for an oncological resection of these tumours.

Patients and Method: The maxillary swing approach was carried out in nine cases (5 JNA, 3 NPC and 1 chordoma) after appropriate osteotomies, to allow the maxilla to be turned laterally based on an osteocutaneous flap. A wide exposure obtained allowed us a good control on bleeding with conventional method during the procedure. After completion of tumor resection, maxilla with its anterior cheek flap from which it obtains its blood supply, was returned to normal position and fixed to facial skeleton with mini plates.

Result: A wide access to occult nasopharynx via maxillary swing approach allowed us a complete excision with minimal morbidity in JNA, NPC and chordoma. The procedure is particularly recommended for resection of recurrent tumour of the nasopharynx after radical dose of radiotherapy in NPC.

Discussion and Conclusion: Maxillary swing approach offers a promising surgical option keeping in view, the hope for a better prognosis in subsequent management of recurrent NPC and JNA not very uncommon tumors in Malaysia. Combined with mandibular swing an extensive chordoma may adequately be addressed for its surgical excision.

OS-3

THE USEFULNESS OF MED EXPERT IN DIFFERENTIATING BENIGN AND MALIGNANT BREAST LESIONS

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Objectives: To determine the accuracy of radiologist trainee in differentiating breast lesions on mammogram and breast ultrasound using Med Expert with histopathology or cytology results.

Petients and Methodology: A total of 81 patients with suspicious breast lumps who underwent mammogram and/or ultrasound and biopsies were recruited. The initial mammogram and breast ultrasound report was compared with the histology/cytology report. These images were subsequently re-reported by the trainee radiologist using Med Expert and the output from the system was compared to the histology/cytology report. The sensitivity, specificity, positive predictive and negative predictive values of radiologist and the trainee radiologist were calculated.

Results: The sensitivity, specificity and accuracy of radiologist for mammogram interpretation were 90%, 70% and 77.5% respectively. For ultrasound it was 96.7%, 72.9% and 82.1%. The sensitivity, specificity and accuracy of trainee radiologist for interpretation of mammogram with the aid of Med Expert were 80%, 96% and 90% respectively. For ultrasound it was 90%, 83% and 85.9%. respectively There was lower sensitivity but higher specificity obtained by the trainee radiologist using Med Expert compared to the radiologist interpretation. However, overall the accuracy of trainee radiologist using Med Expert was higher compared to radiologist.

Discussion and Conclusion: Med Expert is useful in differentiating benign and malignant breast lesions. The trainee radiologist was able to provide a higher accuracy of interpretation for both mammogram and ultrasound, with the aid of the system.

OS-4

FRACTURE RESISTANCE OF WEAKENED ROOT STRUCTURE REINFORCED BY TWO TYPES OF COMPOSITE RESIN AND ENDODONTIC SEALER

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Objective: To compare the fracture resistance of reinforced weakened root canals by two different types of composite resin (auto-cured and light-cured) in teeth apically seal by two different types of sealer (experimental nano hydroxyapatite containing sealer and AH26 silver free sealer).

Materials and Method: The crowns of 112 sound human permanent maxillary central incisors were transversely sectioned leaving 13 mm root length. Canal preparation done using step back technique and half of the sample were seal with AH26 silver sealer and the other half with nano hydroxyapatite sealer. Enlarged post space was prepared for both groups to weaken it before each group were randomly divided into two and finally achieved four groups (1, 2, 3 and 4). Roots in group 1 and 3 were reinforced using light-cured composite resin (Z100) while group 2 and 4 using auto-cured composite resin (Alpha-Dent). A titanium post was cemented and the root mounted in the resin block for mechanical test. The tooth loaded in 130° degree with long axis of the tooth in the universal testing machine until fracture.

Results: The mean load to fracture and SD for groups 1, 2, 3 and 4 was 599.89 N (124.62), 572.08N (158.01), 549.29 N (116.77) and 532.46N (105.97) respectively. A one-way ANOVA and post hoc test indicate that there is no significant difference between the four groups in mean of load to fracture at $p > 0.05$.

Discussion and Conclusion: The combinations of any two materials (Z100, Alpha-Dent) and two sealers (new nano hydroxyapatite, AH26 silver free) in the reinforcement of the weakened endodontically treated tooth give the similar results of the fracture resistance. Alpha-Dent auto-cured composite resin and experimental nano hydroxyapatite epoxy resin sealer could be used to reinforce the structurally compromised root.

OS-5

COMPARISON BETWEEN TWO DIFFERENT POSITION IN ASSESSING THE EASENESS OF INSERTION LARYNGEAL MASK IN ORTHOPAEDIC AND GYNAECOLOGY PATIENTS

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Objectives: To assess the ease of insertion of the Laryngeal Mask Airway (LMA), incidence of adverse respiratory complications and hemodynamic response between supine and trendelenburg position in the elective surgical cases in gynecology, orthopaedic and general surgery.

Patients and Method: A randomized single blinded prospective study was conducted involving a total of 92 premedicated, ASA I or II patients, aged 18 to 65 years and were divided into 2 groups either insertion in supine or trendelenburg position. After a standardized induction of anesthesia, a size 3 or 4 LMA was inserted and the patient breathe spontaneously through the surgery with no muscle relaxant given. Anesthesia was maintained with nitrous oxide, oxygen and sevoflurane. The LMA was removed at the end of surgery with the patient fully awake. The speed and ease of insertion and the number of attempts needed to successfully secure airway were recorded. The incidence of adverse respiratory complications like sore throat, presence of blood on LMA, laryngospasm, coughing, vomiting and desaturation was recorded. Hemodynamic changes such as systolic blood pressure, diastolic blood pressure, mean arterial pressure and heart rate at the different time interval were recorded.

Results: There was no statistically significant difference in time required for successful insertion and number of attempts for both groups. The insertion of LMA at first attempt in 73.9% within 20 seconds in trendelenburg position. There were no differences in incidence of adverse airway complication both in supine and trendelenburg position. Both groups had no statistical differences in hemodynamic parameters during spontaneous ventilation under anesthesia except systolic blood pressure and mean arterial pressure just after LMA insertion, which had statistically significant.

Discussion and Conclusion: The insertion of the LMA in trendelenburg position is safe in a good experience anaesthesiologist and proper patients selection are strongly indicated in the scenario of fail intubation and ventilation as an alternative to the conventional method of LMA insertion.

OS-6

EVALUATION OF APICAL MICROLEAKAGE OF NANO HYDROXYAPATITE SEALER WITH COLD LATERAL AND SYSTEM B TECHNIQUES: IN VITRO STUDY

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Introduction: The most common cause of failure involving endodontic therapy can be attributed to the lack of an apical seal leading to leakage at the apex.

Objective: To evaluate *in vitro* the apical sealing ability of experimental nano-HA endodontic sealer with two different gutta-percha obturation techniques.

Materials and Method: Forty four extracted single rooted human teeth were prepared using Pro Taper nickel titanium rotary system. The samples were randomly divided into four groups of ten each and obturated with either cold lateral or warm vertical condensation "System B" using AH26 or Nano-HA as sealer. Four teeth were used as positive and negative controls. The teeth were coated with nail varnish except apical 2 mm and immersed in methylene blue dye solution for 72 hours and then embedded in resin. Six transverse sections of the teeth were taken starting at the apical foramen and evaluated for dye penetration using stereomicroscope.

Results: Statistical analysis of the results demonstrated significantly less leakage for the system B technique compared to cold lateral condensation ($p < 0.05$). There was no statistically significant difference between Nano-HA and AH26 sealers ($p > 0.05$). All groups displayed the greatest decrease in stained dentin when the apical distance was between 2.0 mm and 4.0 mm. The positive control demonstrated maximum dye Penetration and the negative control showed no dye penetration.

Discussion and Conclusion: The results showed that experimental nano-hydroxyapatite sealer provided a similar apical seal to that obtained with AH26 and could be used as an alternative to the commercial available endodontic sealer. In addition, warm vertical condensation by system B created a better apical seal than conventional cold lateral condensation technique.

OS-7

THE PREVALENCE OF HYPERTENSION AMONG OBESE PREGNANT WOMEN AT HOSPITAL UNIVERSITI SAINS MALAYSIA (HUSM) AND ITS ASSOCIATED FACTORS

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Objective: To determine the prevalence of hypertension among obese pregnant women at HUSM and its associated factors.

Patients and Method: A cross sectional cohort study was conducted from July 2006 until July 2007 involving 388 pregnant women with body mass index ≥ 30 kg/m², admitted for delivery. They were chosen based on inclusion and exclusion criteria and interviewed using questionnaires and outcome of the pregnancy were analyzed.

Results: There was 35% prevalence of hypertension among obese pregnant women. Factors that contributed to hypertension among the study group were family history of hypertension, practice of healthy lifestyle, previous history of hypertension in the pregnancy and gestational diabetes mellitus. Results of associated factors for obese hypertension by multiple logistic regression for healthy lifestyle, previous hypertension and gestational diabetes mellitus showed significant association. There was also significant increased in the number of induction of labour (IOL) and premature delivery among obese hypertensive women ($p=0.001$). There were 21.24% of subjects who had IOL due to pre eclampsia and 30.09% due to diabetes mellitus on treatment. There was no significant difference in the mode of delivery among these two groups. However perinatal outcome showed significant number of low birth weight babies and significant number of admission to neonatal intensive care unit (NICU) in the obese hypertensive women. There was also significant number of babies with low Apgar score in the obese hypertensive women.

Discussion and Conclusion: There was 35% prevalence of hypertension among obese pregnant women. There were associated factors that contribute to hypertension such as family history of hypertension, the practice of healthy lifestyle, previous history of hypertension and gestational diabetes mellitus. In perinatal outcome, there was also increased incidence in low birth weight and admission to NICU in hypertensive mothers.

OS-8

THE PREVALENCE OF BREASTFEEDING AND FACTORS AFFECTING IT AMONG FEMALE DOCTORS IN HUSM.

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Objective: To determine the breastfeeding prevalence and factors influencing the duration of breastfeeding among female doctors in Hospital Universiti Sains Malaysia (HUSM).

Patients and Method: A cross-sectional questionnaire surveys were administered to female medical and house officers who have at least 1 child in HUSM from various departments. Seventy-four questionnaires were distributed and 67 were returned. Replies were analyzed using Epi-Info data and SPSS.

Results: The prevalence of exclusive breastfeeding (EBF) is highest (53.7%) at 0-3months after delivery followed by 11.9% for >3-6months. Meanwhile 1.5% and 4.5% managed to EBF for >6-9months and >9-12months, respectively. There are 7.5% who managed to EBF for >1year. Approximately 30% managed to breastfeed up to 6months. But almost 45% of doctors managed to continue breastfeeding for >6 months until 2years and 4.5% for >2years. The main reasons for ending breastfeeding are returning to work (36.1%), perceived problems with the breast (30.6%) and problems with the baby (11.1%). Almost 63% of mothers feel that their workplace is very supportive towards breastfeeding, 20% found the workplace is indifferent and 16% said the workplace is unsupportive.

Discussion and Conclusion: Returning to work is the main reason why doctors end breastfeeding. Time, space and support have been identified as factors influencing the duration of breastfeeding among female doctors. The duration of maternity leave should be reviewed as longer maternity leave may help to increase not only EBF duration, but the overall breastfeeding duration as well.

OS-9

AN EXPERIMENTAL STUDY ON INTRASTROMAL INJECTION OF AMPHOTERICIN B IN RABBITS WITH FUSARIUM SOLANI KERATITIS

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Objectives: To determine the effectiveness and the safety of intrastromal injection of amphotericin B and to compare between 2 different concentration of amphotericin B (0.15% versus 0.0005%) in rabbits with *Fusarium solani* keratitis

Materials and Method: Fungal keratitis was induced on the debrided cornea of the right eye of 18 New Zealand white rabbits, which was divided into 3 treatment groups: Group A (n=6) was treated with topical 0.15% amphotericin B hourly for 12 hours daily (control), Group B (n=6) was treated with intrastromal injection 0.15% amphotericin B and Group C (n=6) was treated with intrastromal injection 0.0005%. Intrastromal injection and serial clinical examination were conducted at day 3, 6, 9, 11 and 14 to look at the changes in the size of epithelial defect, the depth of the ulcer, stromal infiltration, hypopyon and presence of satellite lesion. On day 14, the eyes were enucleated and sent for histopathology analysis

Results: The intrastromal amphotericin B 0.0005% injection was found to be effective compared to intrastromal 0.15% amphotericin B injection (p=0.001) in treating *Fusarium* keratitis in rabbits. Histopathological examination also revealed absence of fungal load, the depth of ulcer limited to anterior two third, moderate inflammatory responses and mild granulation tissue in the group treated with intrastromal 0.0005% amphotericin B injection. These histopathological findings are consistent with serial clinical observation. There was no evidence of corneal decompensation, severe punctate keratopathy and or corneal melting in the group treated with intrastromal 0.0005% amphotericin B injection

Discussion and Conclusion: Intrastromal 0.0005% amphotericin B injection was found to be effective and safe in treating *Fusarium solani* keratitis. Intrastromal injection may be most effective in severe cases and perhaps may reduce the cost and shorten the hospital stay. Thus, it is recommended for further trial in human.

OS-10

ANORECTAL MALFORMATIONS: THE HOSPITAL UNIVERSITI SAINS MALAYSIA EXPERIENCE FROM 1999 TO 2006

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Introduction: Anorectal Malformations (ARM) are a group of malformations diagnosed by the absence or ectopic location of the anus.

Objective: To review the patients presenting with ARM at Hospital Universiti Sains Malaysia (HUSM) and describe the demographics and outcome in relation to the type of ARM.

Patients and Method: A retrospective case review was carried out in the Paediatric Surgery Unit, Department of Surgery, HUSM between January 1999 and January 2006. A total of 127 patients were identified however only 98 patients fulfilled the inclusion criteria. All the data entry and analysis were carried out using the social science and statistical packaged (SPSS) version 12 licensed to USM. A p value of less than 0.05 was considered statistically significant.

Results: There were 46 patients (46.9%) with high type of ARM and 52 patients (53.1%) with low type of ARM. The ratio of male to female patients was 2:1 and 97% of the patients were Malays. Birth weight of the patients ranged between 1.3kg to 4.5kg. The associated anomalies in these patients were cardiovascular anomalies (25.5%), urological anomalies (22.4%) and chromosomal anomalies (17.3%). Only 44 patients were able to be contacted to assess their functional outcomes. Anal stricture was significant in patients who were not compliant with the anal dilatation protocol ($p=0.007$). The incidence of constipation was higher among patients with low ARM ($p=0.000$). However, the incidence of soiling and incontinence was higher among patients with high ARM ($p=0.000$).

Discussion and Conclusion: The demographic finding in our study is similar to that described elsewhere in the literature. Careful clinical examination is mandatory in all cases of ARM and strict follow up is needed.

OS-11

COMPARISON OF THE FACIAL FEATURES BETWEEN TWO MALAY ETHNICS APPLYING GEOMETRIC MORPHOMETRIC METHOD: A PRELIMINARY STUDY

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Objectives: To compare the facial morphology and to assess the gender difference between two Malay ethnic groups of Jawa and Bugis.

Patients and Method: A comparative cross sectional study design was employed; the sample involved 60 subjects, 30 subjects of Javanese and 30 subjects of Bugis (15 for each gender). The frontal, lateral images and, upper, lower dental models were taken for each subject. Each image was digitized using the Data Digitizer auxiliary program and transfer the data to MorphoStudio™ software.

Results: Bugis male face size was significantly smaller ($p < 0.05$) than Jawa's male at the parotid, lateral nasal areas, while the shape significantly differs at overall except the nasal, middle orbital and lower forehead areas. Bugis female face is significantly smaller ($p < 0.05$) than Jawa at the lower forehead, lateral nasal areas, whereas the shape was significantly differs ($p < 0.05$). The Bugis female face size was significantly smaller ($p < 0.05$) at the upper forehead, lower oral region, but significantly larger at the lateral nasal one. The Jawa's female face size was significantly smaller ($p < 0.05$) at lower forehead, lateral nasal areas than males. The Jawa's male upper and lower dental arches were significantly larger ($p < 0.05$) in the size than that of Bugis's with a significant difference ($p < 0.05$) in the in the shape of the upper dental arch. The Bugis's female upper dental arch was significantly smaller ($p < 0.05$) than male at the anterior region, also the shape was significantly differs ($p < 0.05$). In addition to that there was only a significant shape difference ($p < 0.05$) between Jawa's male and female.

Discussion and Conclusion: Although those two subgroups are belong to same ethnic but there are differences in size and shape of the face and dental arch. In accompanied to that, there are an intra group gender differences.

OS-12

SUCCESSFUL SURGICAL RESECTION OF ADVANCED GASTROINTESTINAL STROMAL TUMOUR POST NEOADJUVANT THERAPY

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Introduction: Gastrointestinal tumors(GISTs) are considered the most common mesenchymal tumors of gastrointestinal tract(GI) arising from the mesenchymal stem cells that later on differentiate into pacemaker cells of GI tract(cells of Cajal) responsible for peristaltic activity in GI tract. Demonstration of KIT tyrosine kinase activity in GIST tumorigenesis has identified a target for therapy. Imatinib is an inhibitor of mutated activated isoform of KIT tyrosine kinase. Use of imatinib preoperatively to make tumor operable has variable response rates. In our case unusual prolonged treatment for twenty months resulted in significant tumor reduction to allow surgical resection.

Case Report: A 48 year Indian male presented with history of swelling and firmness in his left upper part of the abdomen of one month duration. He denied any bowel symptoms but gradual weight loss was noted. On Examination he was pale, on abdominal examination a mass noted extending from left hypochondriac region down to left iliac fossa and up to umbilicus medially with no ascites. His Hemoglobin was 9.4gm/dl but renal and liver function test were within normal range. CT scan abdomen and thorax showed a large well circumscribed mass in the left side of the abdomen extending up to the left iliac fossa measuring 16.8x11.0x24.5cm. Biopsy from the mass showed Malignant Gastrointestinal stromal tumor by high expression for c-kit. Patient underwent a trial of neoadjuvant imatinib mesylate at a dose of 400mg daily for twenty months before tumor resected.

Discussion and Conclusion: In our case unusual prolonged treatment with imatinib for twenty months for GIST resulted in significant tumor reduction to allow surgical resection.

OS-13

VACUUM ASSISTED CLOSURE (V.A.C.) SYSTEM: A VALUABLE TOOL FOR HEALING OF SKIN GRAFT OVER PROBLEMATIC WOUNDS

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Introduction: Vacuum assisted closure (V.A.C.) has been shown to accelerate debridement and promote healing in many different types of wounds. It has also been used in conjunction with split-thickness skin grafts. The vacuum secures the graft, expedite adherence during the revascularization phase, produce the right amount of moisture for graft viability, protect the graft from trauma, and prevent contamination.

Objective: To evaluate the use of V.A.C. to augment healing of skin graft over problematic wounds.

Patients and Method: A retrospective review of patients with problematic wound, treated with skin graft and VAC. Demographic details collected included age, diagnosis and co-morbidities. The effectiveness of the treatment was determined by rate of graft take, wound infection and complete healing time.

Results: Thirteen patients were identified (4 males, 9 females). The average age of the patients was 54 years (range: 14 to 83 years). Diagnosis include necrotising fasciitis (n=2), diabetic ulcer (n=2), chronic wound (n=2), carbuncle (n=1), burn (n=1) and recurrent tumour (n=1). Five of these patients were diabetic. Other comorbidities were anaemia (n=1), multiple fractures and head injury (n=1) and previous radiotherapy (n=1). Seven patients had previous surgeries, where two had skin grafts failures. The average wound dimensions were 13.8cm x 9.8cm x 0.58cm. Three subjects had wound infection at the time of surgery. The average time for VAC used was 6 days (range: 3-10 days) and average graft take was 90.6% (range: 75-100%). The mean healing time was 22.6 days (range: 11-48 days). Two patients had small areas of graft loss, in which one of them had *pseudomonas aeruginosa* infection.

Discussion and Conclusion: The V.A.C. system provides a safe and effective dressing for skin grafts over problematic wounds. Graft survival is improved and healing time reduced. Hence, it is efficacious compared to the traditional bolster dressing.

OS-14

BIOLOGICAL SKIN SUBSTITUTES: AMNION VS COLLAGEN FOR TREATMENT OF FACIAL BURNS

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Introduction: Human amnion and collagen has been used as biological skin substitutes in the management of partial-thickness burns.

Objective: To compare the effectiveness of amnion and collagen in the treatment of facial burns.

Patients and Method: A retrospective review of patients, treated with amnion and collagen for facial burns. The effectiveness of the treatment was determined by infection rate, duration of treatment and resultant scar.

Results: Thirty-one patients were treated with amnion and five with collagen. The average age of patients treated with amnion was 16.7 years (range: 8 months-64 years) and patients treated with collagen was 10.3 years (range: 1-32 years). Superficial partial-thickness burn was the most common type (n=30) amongst the amnion treated patients. The causes included scald (n=15), contact burn (n=12) and flash burn (n=4). Meanwhile in the collagen treated group, three patients had superficial partial-thickness burn. The causes included scald (n=2), contact burn (n=2) and chemical burn (n=1). Mean percent total facial surface area burned was 2.7% (range: 0.5% - 8.5%) in the amnion group and 1.8% (range: 1-3%) in the collagen group. Twenty-four patients (77%) in the amnion, and five patients (100%) in the collagen group received single application. One patient with deep burn in the latter group was subsequently treated with Aquacel. Average duration of amnion treatment was 5.4 days (range: 3-14 days) and collagen treatment was 5.2 days (range: 3-7 days). One patient with mixed thickness burn in the latter group developed wound infection. Long term follow up of the amnion group showed two hypopigmented, one hyperpigmented and one hypertrophic scar. Two patients (mixed and deep thickness-burn) treated with collagen developed hypertrophic scar.

Discussion and Conclusion: Both amnion and collagen are equally effective in treatment of superficial partial-thickness facial burns. The advantage of amnion is that it is readily available at a low cost.

OS-15

TWO-STAGE DYNAMIC FACIAL REANIMATION USING CROSS FACE SURAL NERVE GRAFT AND FREE GRACILIS MUSCLE TRANSFER

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Introduction: The effects of facial nerve paralysis are debilitating and often depressing emotional conditions with a variety of possible functional and aesthetic problems. The ultimate goal in the treatment of facial palsy is the restoration of voluntary and spontaneous movement to the paralyzed side of the face, symmetrical to the normal and to improve patient's appearance. There is a broad spectrum of dynamic and static reconstructive techniques available to reanimate the paralyzed face, none of which fully restore facial function. The most accepted method for reanimation of the paralyzed face is the two stage method that combines cross-face nerve graft with free-muscle transfer.

Case reports: We report two cases of complete long-standing facial nerve palsy. The two patients underwent dynamic facial reanimation in two stages. First stage consists of cross-face sural nerve graft anastomosed with contralateral normal buccal nerve followed by Gracilis muscle transfer as a second stage after a year. Post operative period was uneventful in both cases. The initial facial movement for the first case was about six months. However for the second case the initial facial movement was at three months. The expression was natural and included fine muscle movement. Contrary to the published studies that the initial facial movement at about six to twelve months, our result much faster.

Discussion & Conclusion: The two stages facial reanimation using cross-face sural nerve graft and free Gracilis muscle flap demonstrated a consistent positive outcome in clinical assessments. Despite, that these cases were done in Malaysia for the first time, our result was encouraging and competitive with other international centers.

OS-16

CHARACTERISTIC AND TRENDS OF NASOPHARYNGEAL CARCINOMA (NPC) IN HOSPITAL UNIVERSITI SAINS MALAYSIA (HUSM)

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Objective: To evaluate the characteristic and trend of NPC in patients registered for treatment at Hospital Universiti Sains Malaysia (HUSM) from January 1999 to December 2007.

Patients and Method: 106 patients with confirmed NPC were reviewed at HUSM, Kelantan over the time period from January 1999 to December 2007. These patients were from Kelantan, Terengganu, Pahang, Perak, Johor, Kedah and Sabah. The patients included in this study had histologically proven NPC according to the World Health Organisation (WHO) classification and the Tumor, Node, Metastasis (TNM) staging. We observed great difference in time in trend and characteristic of NPC in the populations. Their clinical records were reviewed and clinical data collected.

Results: The trends of NPC patients in HUSM are not constant. The number of patients shows a continuous rise and sudden drop. The Malay ethnic group showed highest number that attended HUSM. There were twice as many males as females. The highest mean age was in year 2000 which is 54.5 years. Majority of patients (46.2%) were from WHO type III classification which is different from previous study done in HUSM. Based on the TNM staging, 63.2% patients had reached stage IV. Most of the Kelantan patients (63.2%) were from Kota Bharu district which is the main district in Kelantan.

Discussion and Conclusion: Our result indicates that majority of the NPC patients attending HUSM were Malays. Over all number of new cases of NPC reporting to HUSM have significantly dropped from 2005-2007. The mean age for every year is between 40-55 years which is similar to many previous studies.

OS-17

ANTIPROLIFERATIVE EFFECT OF ORTHOSIPHON STAMINEUS ON HUMAN OSTEOSARCOMA CELL LINES: A PRELIMINARY STUDY

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Objective: To verify the antiproliferative activity of *Orthosiphon stamineus* (O.S.) extract on human osteosarcoma cell lines (H.O.S).

Materials and Method: Standardized O.S. extract was obtained from the School of Pharmaceutical Sciences, Universiti Sains Malaysia and the H.O.S CRL-1543 was obtained from American Type Culture Collection (ATCC). Cell culture in Dulbecco's Modified Eagle Media (DMEM) in passage 5 was used. Several doses of O.S. (10µg/ml - 1mg/ml) were applied on the H.O.S. cell lines culture for 24 hours was done. Cell viability assay was performed by using Methyl Thiazole Tetrazolium (MTT) assay whereby H.O.S. cell lines were seeded in 96-well plates after which herbal extract doses were added. After 24 hours incubation period, MTT was added and incubated for a further 4 hours at 37° C prior to addition of dimethyl sulfoxide (DMSO) and shaken for 5 minutes. Analysis was done by using Elisa reader (TECAN) at absorbance 570nm. All experiments were performed in triplicates.

Result: O.S. has significant growth inhibitory effect on H.O.S. even at the low doses. Cell viability assay showed a dose-dependent inhibitory effect of O.S. on H.O.S. cell lines. The 50% inhibitory concentration (IC₅₀) was 200 µg/ml, and the maximal inhibition of cell growth (80%) was obtained at 350 µg/ml. Cell viability decreased as the dosage of O.S. increased showing growth inhibition effect of O.S. on H.O.S. cell lines.

Discussion and Conclusion: Our preliminary study shows that O.S. has antiproliferative effect of H.O.S. cell lines.

OS-18

MEDICAL STATUS AND WAITING TIME FOR CHILDREN UNDERGOING DENTAL GENERAL ANESTHESIA AT TWO TERTIARY CENTERS IN KOTA BHARU, KELANTAN

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Introduction: Dental general anesthesia (DGA) is an alternative option among children who are unable to accept the usual mode of dental treatment. Under DGA various types of treatment such as fillings and extractions can be carried out without conscious cooperation from the child.

Objective: To determine the medical status and duration of waiting time among children indicated for DGA at two tertiary centers in Kelantan.

Patients and Method: A retrospective record review was conducted involving 455 patients who received treatment under DGA at Hospital Universiti Sains Malaysia (HUSM) and Hospital Raja Perempuan Zainab II (HPRZ II) in Kota Bharu, Kelantan between 2001 and 2006. Non-special needs children were normal children without medical problems but require DGA for dental management whereas special needs children were those with underlying medical problems.

Results: About 57.6% were non-special needs and 42.4% were special needs children. The mean age was 7.4 years (SD 4.11). Most children (94.7%) were Malays. Among special needs children, common medical conditions include cardiovascular problems (11.9%), craniofacial anomalies (7.9%), neurological disorders (6.2%), various syndromes (4.6%), multi-system disorders (4.2%), bleeding disorders (3.5%), and small proportions had respiratory, endocrine and other problems (4.0%). Mean waiting time for special needs children before DGA was 2.17 (SD 0.68) months compared to 1.69 (SD 0.77) months for non-special need children.

Discussion and Conclusion: Special needs children had various medical conditions requiring attention before they can safely undergo DGA. Thus the waiting time for special needs children were slightly longer compared to non-special needs children. This may have implications on health care providers and parents or care taker of these children.

OS-19

***DENTAL ARCH MORPHOLOGY IN MALAY SCHOOLCHILDREN:
COMPARISON BETWEEN CLASS I AND CLASS II MALOCCLUSION GROUPS***

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Objective: To study the shape and size differences in dental arches of Malay schoolchildren.

Patients and Method: 100 upper and lower dental study models of 12 and 16 years old subjects were collected from the archive of dental casts from School of Dental Sciences, Universiti Sains Malaysia. The dental casts were classified according to Angle's classification into Class I (N=50) and Class II (N=50) malocclusion groups. 18 homologous landmarks were digitized using Morphostudio TM software. To localize and quantify the shape and size differences between the malocclusion groups, procrustes and finite-element analysis (FEM) were used

Results: Comparison between upper arches of Class I and Class II configurations showed statistical difference ($p < 0.05$), but the lower arches did not show any differences. Upper class I dental arch was wider by 10-15 percent.

Discussion and Conclusion: FEM is a useful method to localize and quantify shape- and size- changes of the upper and lower dental arch.

OS-20

ASSESSMENT OF NASAL AIRWAY IN ADULT MALAY OBSTRUCTIVE SLEEP APNEA PATIENTS USING ACOUSTIC RHINOMETRY

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Introduction: The association between nasal airway obstruction and the etiology of obstructive sleep apnea (OSA) is not clear.

Objective: To compare the differences in nasal airways morphology in Malay adult's with and without OSA using acoustic rhinometry (AR).

Patients and Method: After obtained appropriate consent, 108 adult Malays aged 18-60 years were divided into two groups. The first group consisted of 54 patients with OSA [defined as an apnea-hypopnea index > 5/h of sleep] diagnosed with overnight polysomnography. The second group consisted of 54 healthy, non-OSA control subjects. Clinical examination and acoustic rhinometry readings were obtained from all 108 Malay subjects and compared using independent t-test.

Results: The mean first and second minimum cross-sectional area (MCA1, MCA2) on the AR graph were found to be significantly smaller in the OSA group than in the non-OSA group ($p < 0.001$). Specifically, the mean cross sectional area and volume of MCA1 (nasal valve region) for normal Malay groups were $0.49 \pm 0.16 \text{ cm}^2$ and $1.6 \pm 0.34 \text{ cm}^3$ respectively. For MCA2 (head of inferior turbinate area), the mean sectional area and volume were $0.61 \pm 0.25 \text{ cm}^2$ and $5.3 \pm 1.75 \text{ cm}^3$ respectively. However, for OSA groups, the mean MCA1 cross sectional area and volume were $0.35 \pm 0.18 \text{ cm}^2$ and $1.5 \pm 0.44 \text{ cm}^3$, and for MCA2 the values were $0.37 \pm 0.27 \text{ cm}^2$ and $3.1 \pm 1.70 \text{ cm}^3$.

Discussion and Conclusion: Although the role of nasal obstruction in OSA is controversial, our study lends evidence to the thought that nasal obstruction may contribute substantially to the presence of OSA in Malay patients.

OS-21

DENTAL CAST AND CEPHALOMETRIC ANALYSIS OF BILATERAL CLEFT LIP AND PALATE USING FINITE ELEMENT ANALYSIS

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Objective: To determine the morphological differences of Malay children between subjects with normal occlusion and patients with bilateral cleft lip and palate (BCLP) in term of size, shape, and directionality changes using finite element analysis (FEA).

Patients and Method: In this retrospective study 31 children of BCLP with mean age 9.7 years (SD=1.23 years) were compared to a group of 31 children of normal occlusion with mean age 9.5 years (SD=1.17 years), 6-12 years old using dental cast and lateral cephalometrics. None of the patient had received orthodontic treatment. FEA were performed for localization of morphological differences.

Results: Upper dental cast; BCLP is smaller by 23%- 45% in the middle and more in cleft areas, with increase 24%- 35% in molar areas. While, anisotropic shape changes and downward medially 45° changes. Lower dental cast; BCLP is same size of NC, with small isotropic shape changes and downward directionality changes. For maxilla, BCLP is smaller by 10% - 14% in the area of ANS and PNS. Also, showed increase in maxillary sinus area 20%, with anisotropic shape changes and downward medially 45° changes. For Mandible, BCLP is smaller by 4% - 10% in chin and gonial area, with low anisotropic shape changes and downward directionality changes.

Discussion and Conclusion: Malay children with BCLP had significant morphologic differences from NC. Most of changes concentrated in upper dental cast and maxilla. BCLP is smaller in size with anisotropic shape and downward medial changes. While, lower dental cast and mandible showed limited size and shape changes with downward directionality changes.

OS-22

ADIPONECTIN AND RISK OF BREAST CANCER: A CASE CONTROL STUDY IN KLANG VALLEY, MALAYSIA

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Objective: To investigate the relationship between adiponectin and risk of breast cancer among women in Klang Valley.

Patients & Method: This was a retrospective case-control study involving 70 newly diagnosed breast cancer cases (stage I to III), which were studied prior to the commencement of therapy (response rate 93.3%) and 138 controls (healthy women) aged 29-65 years in the Klang Valley. Both cases and controls were matched for age (± 5 years) and were not on menstruation, not pregnant and not lactating and not having diagnosed with hypertension and diabetes mellitus at the time of survey. Anthropometric measurements including weight, height (to calculate body mass index (BMI)) and waist and hip circumferences (to calculate waist hip ratio (WHR)) were also taken. Body composition was measured using bioelectrical impedance analysis (Maltron BF906). A total of 6 ml fasting venous blood was taken for determination of adiponectin level using Linko Adiponectin ELISA Kit.

Results: Mean adiponectin level in cases of 11.9 ± 4.8 $\mu\text{g/ml}$ were significantly lower than controls of 15.2 ± 7.3 $\mu\text{g/ml}$ ($p < 0.05$). Pre menopausal cases also recorded significantly lower level of adiponectin (12.0 ± 5.2 $\mu\text{g/ml}$) compared to their controls (15.3 ± 7.4 $\mu\text{g/ml}$), and the same trend also prevailed in post-menopausal subjects. The Odds Ratio (OR) of having cancer decreased at a higher level of mean adiponectin level, i.e at the 4th quintile in women [adjusted OR=0.2 (95% CI=0.0-0.6) p trend=0.003]. The decreased risk of getting breast cancer also increased in pre menopausal women at a higher level of mean adiponectin level [adjusted OR=0.4 (95% CI=0.0-1.3) p trend=0.014], and the same trend also revealed in post menopausal women [adjusted OR=0.0 (95% CI=0.0-0.8) p trend=0.033]. There was an inverse relationship between adiponectin and waist circumference ($r=-0.420$, $p=0.000$), WHR ($r=-0.298$, $p=0.000$), BMI ($r=-0.386$, $p=0.000$) and percentage of body fat ($r=-0.179$, $p=0.010$).

Discussion & Conclusion: A higher level of adiponectin (16.7 $\mu\text{g/ml}$) is associated with 80% decreased of breast cancer risk in women. Adiponectin is also inversely correlated with markers of adiposity as assessed using anthropometry.

OS-23

THE ROLE OF GRAY SCALE MORPHOLOGY, RESISTIVE INDEX AND PULSATILITY INDEX USING ULTRASOUND TO DIFFERENTIATE MALIGNANT AND BENIGN SOLID BREAST LESIONS

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Objective: To improvise the ultrasound technique to increase the diagnostic accuracy to differentiate malignant and benign breast lesions.

Patients and Method: From February 2006 until July 2007, there were 55 women with solid breast lesion had undergone breast ultrasound using 13.7MHz linear transducer. The gray scale morphology of each lesion was evaluated. The presence of intratumoral vascularity was evaluated using power Doppler sonography. Resistive index and pulsatility index of the vasculature was assessed using the ultrasound software.

Results: Malignant breast lesions have width to AP ratio of less than 1.30. Lobulated or spiculated shape, presence of microlobulation, heterogeneity, presence of calcification and posterior shadowing were highly predictive of malignancy ($p < 0.001$). The mean value of resistive index and pulsatility index were significantly higher in malignant breast lesions. Resistive index equal to or greater than 0.80 and pulsatility index equal to or greater than 1.21 are suggestive of malignancy ($p < 0.001$). There was significant relationship between gray scale morphology and resistive index and pulsatility index. The indices are higher in the lesions with gray scale morphology of malignancy.

Discussion and Conclusion: Gray scale morphology is useful in differentiating benign and malignant breast lesions. However, not all lesions fulfill the gray scale criteria. When combining gray scale morphology, resistive index and pulsatility index, ultrasound is of diagnostic value to differentiate malignant and benign breast lesions.

OS-24

DIFFUSION WEIGHTED MR IMAGING (DWI) OF INTRACRANIAL GLIOMAS: COMPARISON WITH CONVENTIONAL MR IMAGING AND HISTOLOGICAL FINDINGS.

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Objective: To determine the characteristic and association between DWI and conventional MRI in grading intracranial gliomas.

Patients and Method: This was a cross sectional study over 34 months from to September 2004 to March 2007 in Hospital University Science Malaysia. Forty one patient with histologically proven intracranial gliomas who underwent conventional MRI with 10 of them had DWI were enrolled in this study. A single observer who was blinded for the patients' clinical parameter performed ADC value measurement and interpreting the MRI images. The mean and standard deviation (SD) of gliomas, oedema and contralateral white matter were calculated. Signal intensity of the gliomas on DWI was documented. The accuracy of conventional MRI was determined. Delineation of tumor margin was compared between DWI and sequences in conventional MRI. Demographic findings were also observed and recorded. This was a cross sectional study over 34 months from to September 2004 to March 2007 in Hospital University Science Malaysia. Forty one patient with histologically proven intracranial gliomas who underwent conventional MRI with 10 of them had DWI were enrolled in this study. A single observer who was blinded for the patients' clinical parameter performed ADC value measurement and interpreting the MRI images. The mean and standard deviation (SD) of gliomas, oedema and contralateral white matter were calculated. Signal intensity of the gliomas on DWI was documented. The accuracy of conventional MRI was determined. Delineation of tumor margin was compared between DWI and sequences in conventional MRI. Demographic findings were also observed and recorded.

Results: Range, mean and SD of glioma were 0.69- 1.29 x10⁻³ mm²/s, 1.069 x10⁻³ mm²/s and 0.170 x10⁻³ mm²/s respectively. Range, mean and SD of peritumoral oedema were 1.14 to 1.73 x10⁻³ mm²/s, 1.400 x10⁻³ mm²/s and 0.203 x10⁻³ mm²/s respectively. The normal contralateral white matter range, mean and SD were 0.47 to 0.78 x10⁻³ mm²/s, 0.696 x10⁻³ mm²/s and 0.099 x10⁻³ mm²/s respectively. There were significant different in ADC values of glioma, oedema and contralateral white matter. Mean ADC value (SD) of high and low grade gliomas were 1.008 x10⁻³ mm²/s (0.191) and 1.160 x10⁻³ mm²/s (0.089) respectively which is no significant different. Tumor delineation was poor with DWI. Sensitivity, specificity, positive predictive value and negative predictive value of conventional MRI were 100%, 50%, 58.6% and 100% respectively which is low in predicting high grade glioma.

Discussion and Conclusion: The ADC value is reliable in differentiating gliomas, edema and contralateral white matter. ADC value cannot be used in individual to differentiate tumor grade reliably. The tumor delineation on diffusion-weighted images was generally poorer than all the conventional MRI sequences. Conventional MRI is unreliable in predicting tumor grade.

OS-25

RADIOLOGICAL ANATOMY OF THE LUMBAR PEDICLES IN MALAY POPULATION USING REFORMATTED COMPUTED TOMOGRAPHY IMAGES.

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Objective: To obtain a database for the morphometry of lumbar pedicles from L1 to L5 of the normal Malay population treated in Hospital USM.

Patients and Method: A cross sectional study on 136 Malay patients who were treated in Hospital Universiti Sains Malaysia. Patients divided into two groups children (52 patients) from 9-17 years and adults (74 patients) from 18-60 years. CT abdomen, axial plane with slice thickness of 5 mm and function tools of Workstation 4.0 Ultra 60 software programme were used to measure the required parameters. Transverse outer and inner diameter, lateral and medial cortical thickness, Pedicle length, Transverse pedicle angle and sagittal pedicle angle were measured.

Results: No significant differences between right and left in pediatric group and also the adult group except the transverse outer diameter in adult group. Significant differences between male and female in almost all levels, however these differences were noted in outer and inner diameter in pediatric group. Significant statistical differences between adult and pediatric male in medial and lateral cortical thickness, pedicle length, transverse and sagittal angles at almost all levels. No significant statistical differences between adult and pediatric female at almost all levels.

Discussion and Conclusion: Trends of our measurements were same as the western and other Asian population. However Malay measurements were close to other Asian and smaller compare to westerns.

OS-26

INCIDENCE OF DEEP VEIN THROMBOSIS IN LOWER EXTREMITIES FOLLOWING CAST IMMOBILIZATION

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Introduction: Patient with lower limb immobilization have an increased risk for the development of deep vein thrombosis and subsequent pulmonary embolism, which can be a life threatening situation.

Objective: To evaluate the occurrence of deep vein thrombosis in lower extremities following cast immobilization of at least six weeks duration.

Patients and Method: This prospective cross sectional study was performed in Hospital Universiti Sains Malaysia from December 2007 until April 2008. Patients with lower limb fracture whom were treated with full length cast were included in the study. They were followed up and observed for the sign and symptom related to the development of deep vein thrombosis. At six week follow up, patients' lower limbs were assessed with color Doppler Ultrasound for any feature of deep vein thrombosis.

Results: Thirty nine patients were recruited for the study. One patient develops deep vein thrombosis as evidence by the sign and symptom. Doppler ultrasound confirmed the present of thrombosis in the popliteal vein. The remaining thirty eight patients have no sign or symptom and the doopler ultrasound was normal.

Discussion and Conclusion: Deep vein thrombosis of the lower limb is one of the possible complications after immobilization with plaster cast and should not be overlooked.

OS-27

***EFFECT OF BLEACHING AGENT ON DENTAL COMPOSITE RESTORATION-
IN VITRO STUDY***

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Objective: To evaluate the effect of home bleaching agents; Opalescence Now 10% (Ultradent Products, USA) and Perfect Bleach 17% (Voco, Germany) on the surface hardness of two microhybrid resin composites; Filtek Z250 (3M ESPE, USA) and Point 4 (Kerr, USA).

Materials and Method: Thirty specimens were prepared using acrylic moulds (4mm diameter x 2mm thick); 15 for each materials (n=5 controls, n=5 treated with Opalescence Now 10% CP, n=5 treated with Perfect Bleach 17% CP). All specimens were stored in distilled water for 24 hours before bleaching for 2 hours everyday for 14 days. Vickers hardness tester FV-7 (Future Tech Corp, Japan) was used to test surface hardness. The data were statistically analyzed with Mann-Whitney test ($P < 0.05$).

Results: All tested materials showed no significant changes in Vickers surface hardness after 14 days compared to control group, except Filtek Z250 which showed reduction in surface hardness after bleaching with 10% CP ($P = 0.047$). There were no significant changes in the surface hardness for all tested materials after 14 days bleaching with 10% and 17% CP.

Discussion and Conclusion: Fourteen days bleaching using 10% and 17% CP have no effect on the surface hardness of Point 4 and Filtek Z250. However, Filtek Z250 showed reduced surface hardness in 10% CP when compared with untreated specimens.

OS-28

EVALUATION OF PREOPERATIVE TECHNIUM-99M PERTECHNITATE SCINTIGRAPHY IN PATIENT WITH THYROID NODULE

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Introduction: Preoperative thyroid scintigraphy has traditionally been regarded as the goal standard for the investigation of the solitary thyroid nodule. It determines the activity of the lesion in relation to the adjacent structures.

Objective: To evaluate the accuracy of preoperative thyroid scintigraphy in terms of sensitivity and specificity.

Patients and Method: This is an observational retrospective study, conducted at Hospital Universiti Sains Malaysia. Cases identified were within the operative period of 2000 till 2004. Patients with thyroid mass who had undergone thyroid scintigraphy as part of the preoperative assessment were collected for the study.

Results: 33 patients were recruited. The sensitivity of thyroid scan in our study population was 81.8 % and the specificity was 22.7 %.

Discussion and Conclusion: The specificity of thyroid scintigraphy is low and this technique should not be done as a routine test in every patient with thyroid nodules.

OS-29

ANALYSIS OF CARCINOMA OF BLADDER CASES REGISTERED IN ONCOLOGY CLINIC HUSM

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Introduction: Carcinoma of bladder is among the most common cancers with male to female ratio of 3:1. Most cases present over the age of 50 years. Almost all bladder cancers are epithelial in origin 90% are transitional cell, 5% are squamous cell and 2% are adenocarcinoma. Up to 80% bladder cancers are associated with environmental exposure. They are mainly grouped into three categories; superficial cancers, muscularis propria-invasive cancers and metastatic cancers, each differ in clinical behaviour, primary management and outcome. The most significant prognostic factors are depth of invasion of bladder wall and degree of differentiation. The usual sites of metastasis are pelvic lymph nodes, liver, lung and bone.

Objective: To determine the profile, management and outcome of the patient with bladder carcinoma.

Patients and Method: From December 2000 till December 2007 our clinic registered 71 histologically proven cancers of bladder cases, however only 62 cases were evaluated. Patients age, sex, race, mode of presentation, type of surgery, histology type, staging, management and outcome were analyzed.

Results: 62 patients with median age 60 years (range 33-90 years). Male to female ratio is 51:11. There are 60 Malays, 1 Chinese and 1 Siamese. 85% of patients presented with painless gross hematuria. 45% of pts underwent transurethral resection. Histologically, 55 patients had transitional cell, 2 patients had poorly differentiated, 2 patients had leiomyosarcoma, 1 patient had squamous, 1 patient had adenocarcinoma and 1 patient had metastatic carcinoma. 12 patients presented with stage II, 34 patients stage III & 11 patients at stage IV. 12 patients received both chemotherapy & radiotherapy, 27 patients received radiotherapy alone and 1 patient received chemotherapy alone, 3 patients were put on palliative care and the rest of patients either refused or defaulted treatment. 5 patients developed recurrence, 2 patients developed metastasis. Median follow up was 6 months (range 2-36 months).

Discussion and Conclusion: Most of our patients presented in advanced and late stage. Although more than 70% of our patients received adjuvant radiotherapy and chemotherapy but most of them were lost during follow up soon after the treatment.

OS-30

AN INTERESTING CASE OF BILATERAL ACOUSTIC NEUROMA

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Introduction: Acoustic neuroma is a benign, slow-growing tumor of vestibule-cochlear nerve usually located within the internal auditory canal and cerebellopontine angle cistern, classically near the porous acusticus. Early symptoms may be subtle and may not appear in the beginning stages of growth. Symptoms are mainly due to the mass effect of large tumor on the VIII cranial nerve fibers, the surrounding structures in the ipsilateral cerebellopontine angle. It is life threatening when the brainstem is involved. Imaging study of the brain is critical in early detection and management of tumor.

Case Report: A 24 years old man presented with progressive left hearing loss in October 2007. Later he developed right hearing loss in Dec 2007, associated with headache. No vomiting or blurring of vision. He had a CT scan of the brain done at Selayang Hospital in February 2008. It showed a large heterogeneous mass in the left cerebellopontine angle. It was enhancing on CECT. The right side did not demonstrate any mass. He was referred to HUSM. MRI of the cerebellopontine angles was performed at HUSM in March 2008 which showed bilateral asymmetrical tumors with typical features of acoustic neuroma. Left tumor mass was removed in April 2008.

Discussion and Conclusion: Some of acoustic neuroma or schwannoma lesions are only a few millimeters in dimension but do not have any clinical symptom. Imaging is crucial in detecting early disease. Bilateral vestibular schwannomas are usually associated with neurofibromatosis type 2 (NF 2). Careful review of other cranial nerves is important to rule out NF2.