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Abstract 1

Clinicopathological Features and Survival of Testicular Tumours in a Southeast Asian university hospital: a ten-year review

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Background: Testicular cancers mainly affect young men worldwide. There is lack of published data on patients with this malignant condition from the Southeast Asian region. The aim of this study is to determine the clinicopathologic features of testicular cancer patients treated in a Southeast Asian university hospital and their overall survival rate.

Methods: This was a retrospective study of testicular cancer patients treated between January 2001 and February 2011. Their epidemiology, clinical presentation, pathologic diagnosis, stage of disease and treatment data were gathered. The overall survival rate of this cohort was analyzed.

Results: Thirty-one patients were included in this study. The majority of them were of Malay ethnicity. The average age at presentation was 33.7 years. The commonest testicular cancer treated was non-seminomatous germ cell tumour, followed by seminoma, lymphoma and rhabdomyosarcoma. More than half of all testicular germ cell tumour (GCT) patients had some form of metastases at diagnosis. All the patients were treated with radical orchidectomy and adjuvant chemotherapy for those with metastatic disease. The 5-year survival rate for all testicular cancers in this cohort was 83.9%. The survival rate was 88.9% in 5 years when GCT were analyzed separately.

Conclusion: GCT affects patients in their third and fourth decades of life while lymphoma patients are generally older. Most of the patients treated for GCT are of Malay ethnicity. The majority of patients have late presentation for treatment. The survival rate of GCT patients treated here is comparable to other published series in other parts of the world.

Abstract 2

Renal cell carcinoma: Silver in situ hybridisation detection of chromosome 7 abnormalities

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Renal cell carcinoma (RCC) is the most common form of kidney cancer in adults. Chromosome 7 aneuploidy is well documented in papillary carcinoma. This is a study of chromosome 7 abnormalities in clear cell carcinoma (cRCC), the major subtype of RCC using Silver-in-situ hybridisation (SISH). Paraffin embedded sections of histologically diagnosed cases of cRCC in the Department of Pathology, University of Malaya between 2001 and 2009 were analysed. The silver deposition of copy of chromosome was visualised as black dot and signals were counted in the tumour cells in 20 high power fields. Aneuploidy is defined as loss of gain of chromosome. The pathological features studied include Fuhrman nuclear tumour grading, staging based on the size of the tumour. Association between aneuploidy and clinical and pathological parameters were performed by the application of SPSS v. 16.0. The age at presentation ranged from 39 to 80 years with a mean age of 61.3 yrs. Male to female ratio was 2.3: 1 (Male=28). There were 21 Chinese (52%), 10 Indians and 10 Malays (24% each). The tumour size was less than 7 cm in 31 cases and more than 7 cm in 10 cases. The nuclear grading was grade 1(3 cases), grade 2 and grade 3 (18 cases each) and grade 4 (2 cases). Aneuploidy was noted in 13 out of 41 cases (31.7%). The distribution according to race, sex, histological grade and tumour size are as follows: Chinese (7 /21 cases), Malays (3/10 cases) and Indians (3/10 cases). It was more common among the males (9/28 cases) compared to females (4/20 cases). It was observed mainly in grade 3(8/18 cases), followed by grade 2(4/18 cases), grade 4(1/2 cases) and none in grade 1 (0/3). Aneuploidy was noted even in tumours of less than 4cm in size (6/19). Statistical analysis does not show any significant association between chromosome 7 aneuploidy and race,sex, nuclear grading or size of the tumour. However the presence of aneuploidy in smaller size indicates further investigation into TNM staging.

Abstract 3

Renal Carcinoma with Inferior Vena Cava Tumour Thrombus: an Australian experience

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Introduction: Renal cell carcinoma is known to extend into the IVC in 4-10% of cases.1-3 Despite the technical difficulty, cytoreductive nephrectomy has a role in palliation and may increase survival. We present a retrospective, multi-institution case series of patients undergoing radical nephrectomy and IVC thrombectomy.

Material and methods: We conducted a retrospective review of the medical records of patients undergoing a radical nephrectomy with caval thrombectomy performed by three uro-oncology units from June 1997 to June 2011. Patient demographics, thrombus extension, tumour size, length of stay, blood loss and complications were recorded. Outcome measures were based on disease progression and patient status at time of follow-up.

Results: 29 patients were identified with 18 males and 11 females. The male mean age was 54, the female mean age was 63, and the overall mean age was 58 years. The patients were classified according to Neves score. 14 patients had Neves classification of I, 8 Neves II, 2 Neves III, and 5 Neves IV. Mean tumour size was 103.9mm (range 25-180). Mean blood loss was 1580mL (range 90-8500). Mean operative time (n=22) was 180 minutes (range 70-390). Mean LOS (n=18) was 8.8 days (range 5-22). 31% of patients had a positive surgical margin. Complication and follow-up data was limited. Complication data was available for 9 patients. There was one grade V complication, one IVb, one IIIa, six II, and one grade I complication. Followup data was available for 15 patients. Of these the mean survival time post operatively was 17.7 months (range 3-90)

Conclusion: Despite the invasive nature of radical nephrectomy with caval thrombectomy, blood loss, LOS and complication rates are acceptable. Mean survival post surgery of 17.7 months will likely increase in the Tyrosine Kinase Inhibitor era. However, one must consider the physiological status of the patient prior to embarking on surgical intervention.

Abstract 4

Analyses of the outcome of patients presenting to UMMC with Renal Cell Carcinoma

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Introduction: Renal neoplasms comprise 3% of human cancers, 90% being renal cell carcinomas (RCC) with varying subtypes. RCC are solid tumours usually arising from the epithelial cells of the renal tubule1. Common etiological factors are environmental carcinogens and lifestyle factors. Even though clinically-localised RCC can be successfully removed surgically or treated with cryoablation, metastasis is frequent, and may have already occurred even with early diagnosis2. Epidemiologies have been surveyed in western population3 and certain parts of Asia4 however such studies have not been reported in the Malaysian population.

Objective: The aim of this study was to analyze the epidemiology and outcome of RCC patients in UMMC over the last 6 years.

Method: A retrospective study of all cases of RCC which had undergone certain modes of treatment including demographic, treatment, presenting symptoms and abnormal blood parameters were reviewed.

Results: There were 59 cases at UMMC over 6 years. Of these approximately 63% are males and 37% females. Majority cases were Chinese (62%) followed by Malays (17%), Indians (16%) and others (5%). About 1/3 of patients had metastases on presentation and only smoking was a significant risk factor (23% were still smoking). Half the patients had also pre-existing hypertension. Patients with symptoms of macrohematuria, loin pain and abdominal mass were 29.2%, 41.2% and 26.1% respectively with a small proportion with the classical triad. Majority RCC patients were not hypercalcemic (90.7%). Hemoglobin levels and LFT were abnormal in 16.7% and 28.3% respectively. Albumin levels were low in 13%.

Almost all the RCC patients (97.6%) were given definitive treatment. Of this 82.1% of patients had surgery in the form of radical nephrectomy (curative or cytoreductive) , with more recent cases undergoing partial nephrectomy (10.3%). Debilitated patients with significant co-morbidities who had metastases were managed with palliative intent.

Conclusion: This study highlighted the basic demographic details of RCC patients who presented to UMMC. Associated risk factors include smoking and hypertension. Majority of patients were still amenable to definitive treatment and a growing proportion have been put on molecular targeted therapy.

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<p>Abstract 5</p> <p>Tumour necrosis factor receptor-associated factor 1 (TRAF1) has a functional role in renal carcinoma (RCC) apoptosis, has decreased expression in RCC samples, and may have potential for targeted therapy</p> <p>Retnagowri Rajandram***, Nigel C Bennett*, Zhiqiang Wang***, Joanna Perry-Keene****, David A Vesey*****, David W. Johnson*****, Glenda C Gobe* <i>*Centre for Kidney Disease Research, School of Medicine, The University of Queensland, Brisbane, Australia, **Department of Surgery, University of Malaya, Kuala Lumpur, Malaysia, ***Centre for Chronic Disease, School of Medicine, The University of Queensland, Brisbane, Australia, ****Department of Anatomical Pathology, Royal Brisbane and Women's Hospital, Brisbane, Australia, and *****Department of Nephrology, Princess Alexandra Hospital, Brisbane, Australia</i></p> <p>Background and aims: Renal cell carcinoma (RCC) is the most widespread and lethal among the renal neoplasms.1 Its resistance to therapy-induced apoptosis2,3 impacts on the success of RCC treatments4 and needs definition. The tumour necrosis factor (TNF) receptor-associated factor (TRAF) family of proteins links the TNF receptor superfamily to cell signalling cascades.5 TRAF1 is involved in regulation of apoptosis, proliferation, differentiation and stress responses. It has a role in development of numerous malignancies; however it has not been investigated in RCC to date.6 The aims of this study were to develop expression profiles for TRAF1, apoptosis and mitosis in human RCC of varying classification sub-types, and to investigate the functional role of TRAF1 in therapy-treated RCC in vitro.</p> <p>Methods: 121 samples of human RCC of different sub-types plus paired normal kidney were prepared in tissue microarrays. Expression profiles for TRAF1 (immunohistochemistry and morphometry), apoptosis (ApopTag) and mitosis (proliferating cell nuclear antigen/PCNA) were investigated. TRAF1 function was analysed in vitro in ACHN RCC cells. TRAF1 short interfering RNA (siRNA) was used to inhibit TRAF1 expression in cancer therapy-treated cells (20Gy X-irradiation and/or 500IU/mL interferon-alpha) and apoptosis and mitosis were quantified.</p> <p>Results: In patient samples, TRAF1 localised to proximal tubular epithelium in normal kidney and was significantly decreased in clear cell RCC (P<0.01) and all other RCC sub-classifications grouped together (P<0.05) compared with normal kidney. There was little apoptosis or mitosis identified in any RCC samples. In vitro, TRAF1 siRNA caused a significant reduction in therapy-induced RCC apoptosis and restored mitosis (both P<0.05) in treated cells.</p> <p>Conclusions: TRAF1 may have a pro-apoptotic, anti-mitotic role in RCC. The reduced TRAF1 expression in RCC patient samples compared with normal kidney and localisation of TRAF1 to the proximal tubular epithelium, from which many RCC originate, may demonstrate a potential for targeted therapy in RCC.</p>	<p>Abstract 6</p> <p>Nephrogenic phase in 4-phase renal CT scan in the evaluation of renal masses :- Is it necessary?</p> <p>Ng K L*, Mohd Songib N A**, Hazman**, Adura**, Razack A H* <i>*Division of Urology, Department of Surgery, University Malaya, **Department of Radiology, University Malaya</i></p> <p>Background: Standard 4-phase helical computed tomography (CT) has been recommended and widely used for detection and staging of renal tumours. It includes preliminary phase, corticomedullary phase, nephrogenic phase and excretory phase. It is known that every additional phase in CT examination increases the radiation dosage to the patient thus increasing the risk of radiation related morbidity. Nephrogenic phase has been known to provide the least diagnostic information in the evaluation of renal lesions. This study was conducted to assess the actual relevance of nephrogenic phase in the assessment of renal masses.</p> <p>Objective: To reduce the number of phases in multiphase renal CT without jeopardizing its diagnostic potential in order to minimize radiation dose, by excluding the nephrogenic phase.</p> <p>Patients and methods: 30 consecutive patients (60 kidneys) who had 4-phase renal CT for detection and characterization of renal lesion were selected. Two reviewers evaluated each renal lesion in each phase of CT in each set of 4-phase and 3-phase (excluding nephrogenic phase) blindly in at least 1 week intervals. Lesion detection, renal cortical, medullary and renal vein enhancement in each phase were evaluated. The sensitivity and specificity of the 3 phase renal CT in detection and characterization of renal masses were compared to the standard 4 phase renal CT.</p> <p>Results: No significant difference in the renal cortical enhancement between the corticomedullary phase(CMP), nephrogenic (NP) and excretory phase (EP). Medullary enhancement was best seen in EP and least in CMP. Renal vein enhancement was seen best in CMP. No significant difference in conspicuity of cortical cysts between CMP, NP and EP; however medullary lesions were best seen in EP. The NP and EP are equally good in detection of renal cysts. Angiomyolipomas have equal conspicuity in all three phases. 3 phase CT without the nephrogenic phase has similar ability to 4 phase renal CT in detection and characterization of renal lesions.</p> <p>Conclusion: 3 phase renal CT is adequate for the detection and characterization of renal masses when compared to standard 4 phase CT.</p>
<p>Abstract 7</p> <p>Accuracy of 1.5 T Body Coil MRI in Staging Prostate Cancer: correlations with Robotic Radical Prostatectomy</p> <p>Riduan A R*,K A Mohd Ghani**, Sothilingam S***, Sundram M***,Sharifah Mastura*, N A Yusoff*** <i>*Kuala Lumpur General Hospital, Diagnostic Imaging Department, **Department of Surgery, Faculty of Medicine and Health Sciences UPM, ***Kuala Lumpur General Hospital, Urology Department***</i></p> <p>Objective: The use of MRI in staging prostate cancer is mainly for the detection of extracapsular spread of the disease. The accuracy and specificity of the MRI for prostate is enhanced with the use of endorectal coils. However this facility is not available in our hospital and only body coil MRI is used. This study aims to assess the accuracy of body coil MRI in the staging of prostate cancer</p> <p>Methods: Thirty seven patients who underwent robotic radical prostatectomy were staged using body coil MRI by the same radiologist prior to surgery. Preoperative MRI staging was compared to the postoperative pathological staging.</p> <p>Results: 29 out of 37 patients were staged as T2 by HPE where as MRI detected 24 out of these 29 patients as stage T2. . Eight patients were staged as T3 by HPE of which 6 out of these 8 patients were detected by MRI to be T3 .The overall sensitivity of using MRI in detecting stage T3 prostate cancer is 75%, the specificity is 82%, and overall accuracy is calculated as 70%.</p> <p>Conclusion: Body coil MRI is specific for identifying extracapsular extension of prostate cancer. The use of MRI technology in clinical trials and practice will help to improve prostate cancer diagnosis and treatment plan.</p>	<p>Abstract 8</p> <p>Malaysian Herbal plant with Anti-cancer properties in Hormone-refractory Prostate cancer cells</p> <p>Ng K L*, Low V C**, Kim K H**, Razack A H*, Dublin N*** <i>*Division of Urology, Department of Surgery, University Malaya, **Department of Physiology, University Malaya, ***KPJ Tawakkal Specialist Hospital</i></p> <p>Introduction: Prostate cancer is the second leading cause of male cancer deaths after lung cancer among American men. In Peninsular Malaysia (2004), there were 602 cases of prostate cancer (6.4%) and it ranked as the sixth most common cancer among males. At least 50 % of the patients that present to the urologist in Malaysia are in the advanced or metastatic stages. Many patients seek further traditional treatment (including herbal products) from various Traditional Complimentary Medicine experts as current chemotherapeutic agents are non-satisfactory and therefore the race is in finding a suitable chemotherapeutic agent. Malaysia has a diverse flora from which we could tap this new chemotherapeutic agent.</p> <p>Objectives: The aim is to identify a new source of anti-cancer compounds from a selected medicinal plant (Plant X) and to test its cytotoxic effect against human prostate cancer cells.</p> <p>Methods: Crude extract of Plant X are obtained with various solvents. Various fractions are also obtained with column chromatography. 3-(4,5-Dimethylthiazol-2-yl)-2,5-diphenyltetrazolium bromide (MTT) assay will be used in determination of cell viability. PC-3 cells will be plated in 96-well plates at 3000 cells per well. After 24 hours incubation, cells will be treated with increasing concentration of plant X extract. Then the cells will be further incubated for 3 days and after 72 h incubation, 50µl of MTT dye (2mg/ml) will be added to each well. The media will be removed by aspiration after 3 hours. 150ul of 100% dimethyl sulfoxide (DMSO) per well will be added to dissolve the formazan crystals. The optical density (OD) will be measured by using enzyme linked immunosorbent assay (ELISA) microplate reader at 554nm. This OD value indicates amount of formazan produced and therefore, OD is directly proportional to the number of viable cells present.</p> <p>Results: Fractions (F7&F8) isolated from crude hexane extract of the selected plant X significantly decreased the amount of cancer cells in vitro with half maximal inhibitory concentration (IC50) of 11.9 ug/ml and 12.1ug/ml respectively.</p> <p>Conclusion: Both fractions showed great potential for further purification and development as a new source of anti-prostate cancer compounds for use in treatment of prostate cancer. Future studies are underway to assess the mechanism of action of this plant X extract.</p>

Abstract 9**Prostate Cancer treated with High-dose rate Brachytherapy as Monotherapy**

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Background: A range of options is available at the Peter MacCallum Cancer Centre for radical treatment of prostate cancer (PC). This includes robot-assisted laparoscopic radical prostatectomy, external beam radiotherapy with or without high-dose rate brachytherapy boost and permanent radio-iodine brachytherapy.

Aim: To report on a phase II study of High-dose rate brachytherapy as monotherapy in radical treatment of favorable-risk prostate cancer.

Methods: This prospective, institutional ethics-approved study accrued 79 eligible PC patients with T1-T2cN0M0, Gleason score equal to or less than 7 and PSA not more than 10ug/L. One of 4 dose schedules was used to deliver 3 fractions via a single trans-perineal implant: 10, 10.5, 11 or 11.5Gy per fraction. Urinary toxicity was measured using CTCAE v2; rectal toxicity was measured using RTOG/EORTC scores and EPIC was used to measure health-related quality of life. Biochemical failure was defined as a rise of PSA beyond the nadir plus 2ug/L.

Results: At 39.5 months median follow-up, 7 patients had biochemical failure. Three- and 5-year actuarial biochemical control rates were 88.4% (95% confidence interval [CI], 78.0-96.2%) and 85.1% (95% CI, 72.5-94.5%), respectively. Acute grade 3 urinary toxicity was seen in only 1 patient. There was no reported acute grade 3 rectal toxicity. Rates of late grade 3 rectal toxicity, dysuria, hematuria, urinary retention, and urinary incontinence were 0%, 10.3%, 1.3%, 9.0%, and 0%, respectively. No grade 4 or greater toxicity was recorded. Among the four (urinary, bowel, sexual, and hormonal) domains assessed with the EPIC questionnaire, only the sexual domain did not recover with time.

Conclusion: HDR brachytherapy as monotherapy for favorable-risk prostate cancer, administered via a single implant over 2 days, is feasible and has acceptable acute and late toxicities. Further follow-up is required to better evaluate the efficacy of such treatment.

Abstract 10**Safety, efficacy, and pharmacodynamics of the investigational agent orteronel (TAK-700) in metastatic castration-resistant prostate cancer (mCRPC): Updated data from a phase 1/2 study**

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The investigational agent orteronel (TAK-700) is a selective 17,20 lyase inhibitor that down regulates androgenic steroid production in vitro and in vivo. Since phase 1 data in patients (pts) with mCRPC were promising, this open-label, multicenter study was expanded to gather additional data on safety and antitumor activity. The phase 2 portion of this study included four additional dose cohorts. Pts had received no prior chemotherapy, and had baseline testosterone <50ng/dL, and prostate-specific antigen (PSA) ≥5ng/mL. Here we report updated results. 97 pts received orteronel 300mg BID (n=23), 400mg BID +prednisone 5mg BID (n=24), 600mg BID +prednisone (n=26), or 600mg QD (n=24). At data cut-off (23-May-2011), 62% of pts had withdrawn (including 19% due to AEs and 19% for disease progression). Most common AEs were fatigue (76%), nausea (47%), and constipation (38%); most common grade ≥3 AEs were fatigue (12%) and hypokalaemia (8%). PSA response rates (≥50% decrease) at 12 weeks were 63%, 50%, 41%, and 60% in the 300 mg BID, 400 and 600mg BID +prednisone, and 600mg QD groups. Of 51 pts with RECIST-evaluable disease, 10 had partial responses (of which 5 were confirmed), 22 stable disease, and 15 disease progression. At 12 weeks, median dehydroepiandrosterone sulfate decreased from baseline in all groups: (12 weeks/baseline) 8.65µg/dL/53.0 (300mg BID), 0.10/36.3 (400mg BID +prednisone), 0.10/51.7 (600mg BID +prednisone), 5.30/31.5 (600mg QD). Similarly, at 12 weeks, median testosterone decreased from baseline in all groups: (12 weeks/baseline) 0.98ng/dL /8.50 (300mg BID), 0.30/9.90 (400mg BID +prednisone), 0.07/7.33 (600mg BID +prednisone), 0.49/6.31 (600mg QD). Mean circulating tumor cell numbers also decreased in all groups. In conclusion, orteronel ≥300mg BID appears active and well tolerated in pts with mCRPC, with similar efficacy ±prednisone. Preclinical data and changes in pharmacodynamic parameters in this study suggest selective 17,20 lyase inhibition. Final data will be reported.

Abstract 11**Re-validation of the Vienna Nomogram for Trans-Rectal Ultrasound Biopsy (TRUS) of prostate**

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Introduction: There have been many described methods of performing TRUS biopsy of prostate. The Vienna Nomogram was proposed and validated in the last decade, as an effective method in performing TRUS biopsy. It was shown to improve cancer detection by 66.4% as compared to sextant or octant biopsies in patients with Prostate Specific Antigen (PSA) range 2 to 10 ng/ml. However there have been recent studies concluding that the Vienna Nomogram does not significantly improve cancer detection rate. Thus we set out to investigate this matter and to re validate the Vienna Nomogram

Objective: To revalidate the use of the Vienna Nomogram and find significant improvement in prostate cancer detection rates among patients undergoing TRUS biopsy.

Methods and Material: All patients who underwent TRUS biopsy in UKM Medical center from 2000 till June 2011 were included. Data was retrieved from the hospitals computerized database which had patients' bio-data, TRUS biopsy particulars, PSA value and histopathology report. Patients who had repeat biopsy were excluded. Group A consisted of patients with Sextant/Octant biopsies (year 2000 until end 2007), Group B was all patients whom underwent TRUS biopsies using the Vienna Nomogram (2008 until present). The two groups of patients were compared for cancer detection rates according to PSA values. Chi square analysis was used to find significance (p < 0.05)

Results: A total of 480 patients were included. Mean age of patients was 67.6 years. The overall cancer detection was 24.5%. Group A had 247 patients while Group B had 233 patients. Overall cancer detection regardless of PSA value was 19.8% (Group A) and 28.6% (Group B). However in PSA range 2-10ng/ml, cancer detection was 13.7% in Group A versus 15.3% in Group B, which was not significantly different (Fisher's Exact Test p=0.68). Average cores taken was 9 (Gp B) versus 6.4 (Gp A)

Conclusion: Our study failed to find significant benefit of performing TRUS biopsy according to the Vienna Nomogram for first time biopsies in PSA range 2-10 ng/ml. In an Asian population with lesser incidence of prostate cancer, increasing the cores at first biopsy of prostate may not confer additional benefit as was demonstrated in Western population.

Abstract 12**Correlation between Magnetic Resonance Imaging and Diffusion-Weighted Imaging of prostate in Malaysian males with high prostate specific antigen in the diagnosis of prostate cancer**

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Introduction: Prostate cancer is the sixth most common cancer in Malaysia and its incidence is increasing. Apart from digital rectal examination, routine investigations include prostate specific antigen test and transrectal ultrasound (TRUS) biopsy of prostate. After histopathological confirmation of cancer, imaging modalities will include bone scan and also magnetic resonance imaging (MRI) to assess organ confinement to prostate gland. T2 weighted MRI often delineates prostate cancer as a region of low signal intensity on background of high intensity of normal prostate zones. However, although the sensitivity of T2 weighted images is high, the specificity is poor. Newer method of developing an image contrast (Diffusion weighted imaging, DWI) in MRI through apparent diffusivity can provide an alternative to T2 weighted MRI. The differential in apparent diffusion properties of prostate cancer regions compared to normal prostate gland regions can produce an apparent diffusion coefficient (ADC), thus the potential for high image contrast.

Objective: To assess the efficacy and accuracy of prostate cancer detection using MRI alone and MRI with DWI with correlation to PSA and histopathology result of prostate biopsies.

Method: Study population drawn from single centre (UMMC) and approval from Medical Ethics Committee was obtained. Patients with high PSA (> 4ng/ml) referred from the urology clinic were included and they underwent MRI and DWI before undergoing TRUS biopsy of prostate. Two independent consultant radiologists evaluated the MRI images alone and the MRI with DWI images and rated the presence or absence of prostate cancer. They were blinded to the PSA and histopathology results of the patients.

Results: 30 patients were included in this study after informed consent. Their images were viewed and analysed. Preliminary results have been positive in regards to MRI with DWI. There were significant apparent diffusion coefficient differences in prostate cancer regions when compared to normal prostate tissue regions. This study has reflected similar results of MRI with DWI in our local population of men with prostate cancer as other published results overseas. There was positive correlation of histopathology results.

Conclusion: MRI with DWI can provide another option to the detection of prostate cancer. It is as efficacious as the standard T2 weighted MRI images in detecting prostate cancer as it is highly sensitive and specific. There may be a role of MRI with DWI in selecting patients with persistent high PSA and previous negative biopsies for further biopsies thus avoiding the morbidity of repeated biopsies.

Abstract 13

Effectiveness of Povidone-Iodine Enema in Reducing Infectious Complications of Transrectal Ultrasound-Guided Prostate Biopsy

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Objective: To determine the effectiveness and safety of povidone-iodine enema on infectious complications after transrectal ultrasound (TRUS) guided prostate biopsy.

Methods: Data was collected for 157 patients undergoing TRUS guided prostate biopsy in our centre from 2009 till 2011. All patients received rectal suppository before the procedure. The first 100 patients were only given Ciprofloxacin and the subsequent 57 patients received 50 mls of 10% povidone-iodine enema two minutes before biopsy. Infectious (sepsis/fever without sepsis) and non infectious (haematuria/rectal bleeding/urinary retention/haemospermia) complications were recorded by a telephone follow-up at 1 week.

Results: Infectious complications developed in 6 cases (6.0%) in control and in 2 cases (3.5%) in povidone-iodine group. In the control group, 6 patients had fever, 2 without urinary tract infection, 3 with urinary tract infection without sepsis and 1 had sepsis (E.coli resistant to ciprofloxacin). Two patients were admitted while 2 others were treated with antibiotics as outpatient. In the povidone-iodine group, 2 patients had fever, 1 with urinary tract infection without sepsis and was admitted while the other had fever without urinary tract infection which resolved spontaneously. The infectious complications between the two groups were not statistically significant (p=0.393). In the control group, 39 patients (39.0%) had haematuria, 13 (13.0%) had rectal bleeding, 2 (2.0%) had urinary retention requiring catheterization and 14/48 (29.1%) had haemospermia. In the povidone-iodine group, 31 patients (54.3%) had haematuria, 12 (21.0%) had rectal bleeding, 2 (3.5%) had urinary retention requiring catheterization and 3/15 (20.0%) had haemospermia. The non infectious complications were not statistically significant between the two groups.

Conclusion: The use of povidone-iodine enema before TRUS guided prostate biopsy reduces the infectious complications by 58% but this was not statistically significant.

Abstract 14

Characterisation and analysis on the influence of hormones in patients with prostatic diseases. Can it help in the diagnosis of prostate cancer in Asian men with PSA in the "grey area", PSA <= 20 ng/ml ?

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Background: It is well known to the Asian urologists that the incidence of prostate cancer in Asians is low compared to the Westerners with PSA <= 20 ng/ml. These differences could be due to genetic or differences in the interaction of the various hormones. The scientific evidence for the correlation between hormones, in particular androgens and the risk of prostate cancer have been equivocal.

Objective: A pilot prospective case-control study to determine the correlation between hormonal levels and prostatic diseases (prostate cancer and benign prostatic hyperplasia) in Asian males.

Methods: Sera from 2 groups of patients were collected:- treatment naïve prostate cancer (CaP) patients (n=14) and benign prostatic hyperplasia (BPH) patients (n=14). The sera were then analysed using enzyme linked immunosorbent assay (ELISA) for the following hormones:- testosterone, oestradiol, androstenedione, cortisol, Dehydroepiandrosterone(DHEA), follicle stimulating hormone (FSH), luteinizing hormone (LH) and prostate specific antigen (PSA).

Results: There were no significant difference in PSA levels between our BPH (Mean PSA= 12.96 ng/ml) and prostate cancer (Mean PSA= 12.16 ng/ml) samples (p= 0.87). Our results comparing serum hormone levels between CaP and BPH were not statistically significant for androstenedione, DHEA, FSH and LH. The following hormones did show statistically significant levels for $\alpha \leq 0.20$, in descending order :- testosterone (p=0.03); DHT (p=0.14); Cortisol (p=0.14); oestradiol (p=0.20). Logistic regression and the likelihood of prostate cancer using these parameters and PSA gave a Nagelkerke R²=0.5

Discussion: Gann et al reported increasing risk of prostate cancer with increasing testosterone, decreasing sex hormone-binding globulin (SHBG), and a nonlinear, inverse association with increasing oestradiol levels. Our study showed higher testosterone levels in patients with BPH as compared to prostate cancer. Our study also showed that prostate cancer patients had lower oestradiol levels when compared to BPH patients. The independent variables in our logistic regression above, with R²=0.50, further suggest that these variables may be important in the development of prostate cancer and can be used to discriminate prostate cancer from non-cancer in Asian men with PSA within the "grey area", PSA <= 20 ng/ml .

Conclusion: Serum levels of testosterone, DHT, cortisol and oestradiol may be associated with the development of prostate cancer and to discriminate prostate cancer from non cancer in Asian men with PSA within the "grey area", PSA <= 20 ng/ml. Further studies tailored to hormonal influences need to be done.

Abstract 15

Robotic Assisted Radical Prostatectomy- Developing the Learning Curve in a Low Volume Center

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Introduction: The incidence of prostate cancer in Malaysia is low averaging 12 age standardized cases per 100 000 population. PSA screening is not mandatory in all patients however is encouraged in male patients who present with lower urinary symptoms suggestive of BPH and also in those with a family history of cancers. Due to the low prevalence of prostate cancer, this center only does an average of 30 radical prostatectomies a year. The robotic procedures are shared among 3 console surgeons, therefore done by low volume surgeons.

Objective: To evaluate the learning curve of performing Robotic Assisted Radical Prostatectomy in a low volume center comparing the first 47 cases with the next 46 cases.

Methodology: Patients with organ confined prostate adenocarcinoma were stratified based on the D'Amico classification and counseled on treatment options. Patients who were agreeable for Robotic Assisted Radical Prostatectomy were included in this study. Patients were also counseled for bilateral pelvic node dissection (PLND)

Radical prostatectomy followed by bilateral PLND were performed by 3 console surgeons. Node dissection included removal of the obturator, Internal iliac and external iliac packet of nodes. Post operatively patients with complications were graded according to the Clavien classification. All specimens were sent to a single pathologist for evaluation.

Results: A total of 93 patients who underwent robotic radical prostatectomy between April 2008 to June 2011 were evaluated. The first 47 cases were evaluated separately from the next 46 cases. For the first 47 cases, mean age was 67.1 years, mean BMI 24.1 and mean PSA at presentation was 15.8 ng/mL. Mean console time was 363.48 minutes which included radical prostatectomy and bilateral pelvic node dissection. Mean number of lymph nodes removed was 12. There were 28 patients pT2a / pT2b/pT2c cases with 2 focal and one multiple margin positive, all at the apex and 13 cases with pT3 /pT4 with 12 margin positive , 7 focal and 5 multiple. Margin positive rate was 10.7% for pT2 and 92.3% for pT3/pT4 . Overall complication rate was 12.8% . One patient with Clavien I, one patient with Clavien II, 2 patients with Clavien IIIa and 2 patients with Clavien IIIb complications.

For the next 46 cases, mean age was 65.5 years, BMI 23.6 and mean PSA at presentation was 12.3 ng/mL. Mean console time remained the same, 377 minutes. However, there was increase in mean number of nodes removed which was 14 nodes although this was not statistically significant. There were 24 cases with pT2 , 4 with margin positive , 3 focal and one multiple. and of the 14 cases with pT3/pT4 , 8 cases had margins positive. Margin positive rate was 16.7% for pT2 and 57% for pT3/T4. Overall complication rate was 6.5% with 4 patients having Clavien I, one patient with Clavien IIIa and one patient with Clavien IV complications

Conclusions: The patient demographics were similar in both groups of patients. Mean console time was also similar, probably because the cases were shared between 3 console surgeons with variable levels of experience. There was however a small increase in the mean number of nodes removed although not significant.

There was a substantial drop in the margin positive rate for pT3/pT4 prostate cancers in the second 46 cases. There were also more focal margin positive compared to multiple margin positive in the last 46 cases. It was also observed that the majority of margin positives occurred at the apex. There was a significant drop in complication rate in the last 46 cases from 12.8% to 6.5%. The majority of complications were Clavien I where no intervention was necessary.

It appears that in a low volume center where cases are shared between more than one surgeon, operative time is still not reduced even after 90 cases , however complication rates have significantly reduced and so has margin positive rates for the higher risk cancers.

Abstract 16

Transobturator Adjustable Tape Operation for Female Stress Urinary Incontinence: Initial Experience in Tuen Mun Hospital

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Objectives: To analyze retrospectively the efficacy and safety of the novel transobturator adjustable tape (TOA) operation for female stress urinary incontinence (SUI)

Patients and Methods: From April 2009 to July 2011, 11 women mean age 57 years (range 43 – 77) with subjective and objective SUI demonstrated by video urodynamic study underwent TOA. The operation was performed under either spinal or general anaesthesia. Four groups of sutures were brought out in the obturator wound bilaterally and on both sides of the vaginal wound for adjustment of the tape tension in Day 1 to Day 7 post-operatively. Uroflowmetry was also performed upon removal of the adjustment sutures.

Results: Of the 11 patients, 1 suffered from paraplegia with continent Mitrofanoff stoma. 10/11 patients are diaper dependant and 8/11 had childbirth through vaginal delivery. The operative time was 50.5 ± 13.2 mins. The mean number of pads use before sling operation was 4.1 per day. It decreased to 0.3 pad per day after operation. The cure rate (defined as pad-free status) was 80%. 3/11 required tightening of tape while 1/11 required loosening. Among the 10 patients with uroflowmetry performed after tape adjustment, the mean maximal flow rate was 19.6 ml/s (range 8.5 – 41.4), mean voided volume of 327.3 ml (range 129 – 778) and mean post void residual of the 96.3 ml (range 0 – 231). None of the 11 patients reported retention of urine nor sling erosion. 1/11 had recurrent stress urinary incontinence pending video urodynamic study.

Conclusion: TOA seems promising for surgical treatment of female SUI which allows adjustment of the tension of the tape repeatedly in the first week post-operation. Longer follow up and larger case series is required to ascertain its long term efficacy.

Abstract 17**Erectile Dysfunction(ED) among non-urological patients: Prevalence and the relationship with common risk factors**

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Objective: To evaluate the prevalence and relationship between Erectile Dysfunction (ED), Abdominal Obesity (AO), Biochemical Hypogonadism, Lower Urinary Tract Symptoms (LUTS) and common medical conditions among non-urological patients at University Malaya Medical Centre (UMMC).

Material and Method: Medical Ethics Committee approval obtained prior to commencement. 600 sexually active men above the age of 40 years were recruited at the phlebectomy clinic of UMMC. They had no known urological problems. IIEF - 5 (International Index of Erectile Function - 5) and IPSS (International Prostate Symptom Score) questionnaires were used for assessment of erectile dysfunction and LUTS respectively. Waistline was measured and serum testosterone level was taken between 8.00 to 11.00 am. SPSS 19 (Statistical Package for the Social Sciences) software was then used to analyze the data obtained.

Results: The mean age of the study population was 55.9. Overall, the prevalence of ED was 64.7 % (n=389) and most common among the Indians (68.2%) compared to the Chinese (63.5%) and Malays (62.9%). Abdominal obesity (AO) (waistline \geq 90cm) was seen in 67.1% (n=261) of those with ED. LUTS in the form of positive IPSS score for mild, moderate and severe symptoms was significantly correlated to ED (p=0.013). Only 28.2 % (n=110) of those with ED had biochemical hypogonadism. We also found that ED was common among patients on follow-up for DM (56.0%), Hypertension (68.1%) and Dyslipidemia (62.7%).

Conclusion: This study shows a link between ED and various factors like AO, LUTS (without treatment for BPH) and common medical conditions indicating a multifactorial cause for ED. Medical therapy and lifestyle modification could improve erectile function and hence, their quality of life.

Abstract 18**The significance of "difficult-to-perform" Digital Rectal Examination**

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Background: Digital rectal examination (DRE) is an essential part of clinical examination during the assessment of patients with lower urinary tract symptoms. However, DRE could be difficult to perform in certain patients with thick gluteal tissues which impede the insertion of the examining finger into the rectum.

Objective: To study the differences between patients with "difficult-to-perform" DRE and "easy-to-perform" DRE in term of cardiovascular risk factors.

Methods: Patients who attended a prostate screening programme were included in the study. Basic biodata and cardiovascular risk factors were recorded. "Difficult-to-perform" DRE was defined as the failure to insert the examining finger into the rectum beyond the proximal interphalangeal joint (thus resulting in an inadequate assessment of the prostate gland).

Results: A total of 132 patients were recruited. "Difficult-to-perform" DRE were noted in 15 patients (11.4%). This group of patients were younger than patients with "easy-to-perform" DRE (mean: 57.2 vs 60.8 years; p= 0.019, t test). They had higher weight (mean: 83.5 vs 68.6 kg; p=0.007, t test), body mass index (mean: 29.7 vs 25.1; p= 0.012, t test) and thigh circumference (mean: 63.5 vs 56.0cm; p= 0.02, t test). However, there was no significant difference between the two groups in waist circumference, incidences of hypertension, diabetes and dyslipidaemia.

Conclusion: Patients with "difficult-to-perform" DRE have higher weight and thigh circumference but no difference in other cardiovascular comorbidities. The pattern of body fat distribution could be the reason for the difficulty faced in performing DRE in these patients. Other method is needed for the complete clinical examination of the prostate.

Abstract 19**Prostate Volume and Intravesical Prostatic Protrusion in predicting the outcome of Trial Without Catheter following Acute Urinary Retention.**

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Objective: To prospectively investigate prostate volume and intravesical prostatic protrusion in predicting the outcome of trial without catheter after an episode of acute urinary retention (AUR).

Methods: Men presenting with benign prostate enlargement associated acute urinary retention (AUR) to Hospital Sultanah Aminah, Johor Bahru from 1-1-2011 till 15-9-2011 were prospectively recruited. Patients were catheterised with an indwelling urinary catheter and then referred to the Urology Clinic for assessment. They were started on alpha blockers and trial without catheter (TWOC) was performed in 2 weeks time in the clinic.

Results: 46 patients were included in the study. Overall the success rate for TWOC was 70%. 32 patients had successful TWOC. Their mean \pm SD PV, IPP, IPPS score and age was 46.0750 \pm 16.44992cc, 5.6625 \pm 5.87223mm, 16.7813 \pm 7.04701 and 69.1471 \pm 8.85278 years old. 14 men had failed TWOC. Their respective mean \pm SD PV, IPP, IPPS and age was 67.9071 \pm 22.73176cc, 13.0143 \pm 8.65953mm, 15.8571 \pm 4.65514 and 68.7500 \pm 10.77982 years old. There was significant correlation between PV and IPP (r=0.689 p=0.000). There was no correlation between PV and age (r=-0.169, p=0.262). Between IPP and age, men who were younger and had AUR had a significantly larger IPP compared to those who were older (r=-0.372 p=0.011). Men who had smaller prostates (<50g) had a higher chance for a successful TWOC (23 out of 26) compared to those with prostate volume of 50g or more (9 out of 20). Chi-square test showed a significant p-value of 0.0014 (<0.05). 20 patients had grade 1 IPP (1-5mm). 18 of them had successful TWOC. For grade 2 IPP (5.1-10mm), 7 out of 12 patients had successful TWOC. And 7 out of 14 patients with grade 3 IPP (>10mm) had successful TWOC. This was statistically significant with a p-value of 0.0274 (<0.05). Comparing between grade 1 and grade 3 IPP, the p-value was 0.0092 (<0.05).

Conclusion: PV and IPP are sensitive in predicting the outcome of TWOC. Men with prostate volume of less than 50g and IPP of 5mm or less are more likely to have a successful TWOC following AUR. There is a significant correlation between PV and IPP.

Abstract 20**Alpha Blocker Withdrawal in patients who are on Combination 5-alpha reductase inhibitor and Alpha Blocker for the treatment of BPH**

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Background: Long term combination therapy with 5-alpha reductase inhibitor and alpha blocker has been recommended for the medical treatment of symptomatic BPH when the prostate size is more than 30g. These medications however are costly and are associated with significant side effects. The SMART-1 study by Barkin et. al. suggested that alpha blocker may be safely stopped after at least 24 weeks of combination therapy.

Objective: In light of the result of the SMART-1 Study, we conducted this study to evaluate the feasibility and safety of alpha blocker withdrawal amongst patients with BPH receiving combination therapy in our center. We also hope to determine predictive markers of unsuccessful trial of alpha blocker withdrawal.

Methods: Alpha blocker was withdrawn in 35 patients who have been on combination 5-alpha reductase inhibitor and alpha blocker for at least 9 months. Data collected include IPSS, PSA, prostate volume, Qmax and duration of combination therapy prior to start of the study. Patients were evaluated for symptoms and urinary retention episodes at weeks 4, 12 and 24.

Results: In the interim analysis at 4 weeks, 10 patients or 29% reported a worsening of their symptoms resulting in the need to restart their alpha blocker. None of the patients developed urinary retention. As yet, there is no statistically significant co-relation of IPSS, PSA, prostate volume, Qmax as well as the duration of combination therapy with the success of alpha blocker withdrawal.

Conclusion: Alpha blocker can be successfully withdrawn in the majority of patients with BPH who had been on combination therapy for at least 9 months. However, we are unable to find any predictive markers for those patients who failed alpha blocker withdrawal treatment in this current study. Longer follow up and larger sample size may be needed.

<p>Abstract 21</p> <p>Retrospective Analysis on the Outcome of Transurethral Resection of Prostate (TURP) in Treatment of Benign Prostatic Hyperplasia (BPH) done in Hospital Universiti Sains Malaysia from January 1998 – December 2008</p> <p>Azhar A H, M N G Rahman <i>Urology Unit, Department of Surgery, Hospital University Sains Malaysia, Kubang Kerian</i></p> <p>Introduction: Transurethral resection of the prostate (TURP) has for decades been the standard surgical therapy for lower urinary tract symptoms secondary to benign prostatic hyperplasia. Studies on the outcome of TURP had been conducted since 1964. However, most of the studies were done on western population. There were not many local studies done on the outcome of TURP.</p> <p>Objectives: The aim of this retrospective study is to determine the demographic characteristics of patients who underwent TURP in HUSM from 1998 till 2008, to evaluate the outcome in terms of results and complications – (intraoperative, immediate and late post operative) of TURP, and to identify factors associated with the outcome of TURP.</p> <p>Methodology: A total of 197 case notes that were available were reviewed. The parameters that were sought were mean age, comorbidities, indications for TURP, resection time and resected tissue weight, histopathological diagnosis, intraoperative complications, amount of blood transfusions, hospital stay, catheter duration, and early and late postoperative complications.</p> <p>Results: We reported a generally favorable view of the outcome of TURP in HUSM. Mortality was nil. Morbidity was manageable and was comparable to other urological training hospitals in the world. The complications were post operative bleeding and clot retention, capsular and bladder perforation, TURP Syndrome, urinary tract infection, pancreatitis and retrograde ejaculation. Among all, post operative bleeding was the commonest complication. It has been shown that post op bleeding; incidence of clot retention and TURP Syndrome has a strong correlation with resection time and volume of resected tissue. There was a significant correlation between patients who had post operative urinary tract infection and preoperative bacteriuria, duration of resection time, amount of resected and patients who was catheter dependent. Incidence of capsular perforation had been found to be significantly higher in patient with longer duration of prostate resection.</p> <p>Conclusion: The outcome and complication rate of TURP done in HUSM is comparable to most of the world.</p>	<p>Abstract 22</p> <p>The Influence of Lower Urinary Tract Obstruction on Bladder Urothelium: A Preliminary Study of Effect of Obstruction on the Carcinogenesis of Bladder Cancer</p> <p>Victor Palimbong, Ferry Safriadi, Aaron Tigor Sihombing <i>Department of Urology, University of Padjadjaran, Bandung</i></p> <p>Introduction: It is believed that the carcinogenesis of bladder cancer is multifactorial. To explore the possibility of lower urinary tract obstruction as one of the factor that takes part in the carcinogenesis of bladder cancer, we design a preliminary study to look for the influence of lower urinary tract obstruction on the mucosa of the bladder.</p> <p>Objective: To evaluate the changes in the bladder mucosa caused by lower urinary tract obstruction.</p> <p>Material and methods: A group of 10 six weeks old male wistars were subjected to artificial severe partial obstruction by ligating the bulbous part of urethra up to a diameter of 0,25 mm and another group of 10 equal wistars were subjected to mild partial obstruction by ligating the same part of urethra up to 0,5 mm. Another 10 equal untreated wistars were used as control group. After 20 weeks of the ligation all wistars of those 3 groups were sacrifice and the bladder mucosa were harvested. Histological evaluation of the bladder mucosa from all wistars were conducted by an experienced pathologist and a chi-square test was used to evaluate the differences in the bladder mucosa of all groups.</p> <p>Results: Hyperplasia of the bladder mucosa were shown in both ligated urethra groups. Papiloma was obtained in 1 specimen (p<0,05) and dysplasia in 2 specimens (p<0,05) from the obstructed groups.</p> <p>Conclusion: An obvious changes were shown in the bladder mucosa of the ligated urethra wistars.</p> <p>Keyword: Partial urethral obstruction, bladder urothelial changes.</p>
<p>Abstract 23</p> <p>Outcome and Safety of Retrograde Intra-renal Surgery for Stones less than 2cm</p> <p>Christopher C K Ho, Tan Guan Hee, Goh Eng Hong, Praveen Singam, Badrulhisham Bahadzor, Zulkifli Md Zainuddin <i>Urology Unit, Department of Surgery, Universiti Kebangsaan Malaysia Medical Centre, Kuala Lumpur, Malaysia</i></p> <p>Background: Retrograde intra-renal surgery (RIRS) has been used to remove stone less than 2cm in the kidney. Its role is not well-defined.</p> <p>Objectives: The objective of this study is to evaluate the outcome and safety of RIRS based on its usage either as a primary or secondary procedure and analyze factors predicting stone-free rate (SFR).</p> <p>Materials/Patients Methods: A retrospective analysis of data of all patients who underwent RIRS over a ten year period (2002- 2011) was done. Stone size was assessed as the surface area and calculated according to EAU guidelines. In cases of multiple stones, the total stone burden was taken as the sum of each stone size. Stone burden was then classified as 80 mm² or less and greater than 80 mm². RIRS was divided as primary procedure or as secondary (after failed extracorporeal shock wave lithotripsy or percutaneous nephrolithotripsy). Stone clearance was defined as complete stone absence or stones < 4mm which were deemed insignificant, as seen on ultrasonography and plain radiography.</p> <p>Results: The overall SFR for renal stones treated with RIRS in our centre was 55.4%, and the complication rate was 1.5% (one case of sepsis). The only factor that affected SFR in this study was the indication for RIRS. When the procedure was performed as a primary operation, it showed significantly better SFR (64.3%). The SFR for lower pole stones was only 44.4%. No statistically significant difference in SFR in terms of stone burden, radio-opacity and combination with ureteral stone.</p> <p>Conclusion: RIRS should be advocated as a primary mode of treatment in renal stones whenever possible.</p>	<p>Abstract 24</p> <p>The Significance Of Infection On Urine Culture In Urological In Patients Scheduled For Surgery With Nitrate Positive Urine Feme</p> <p>Mohd Zulhily bin Md Khalid, Sophia Leza Zulkifly, Ainizan Abd Talip <i>Jabatan Kejururawatan, Pusat Perubatan Universiti Kebangsaan Malaysia</i></p> <p>Purpose: Diagnosing urinary tract infection in catheterized patients with or without chronic lower urinary tract infection is a critical step. Urinary nitric oxide synthase activity correlates with certain disease processes affecting urinary tract. In this study, we scrutinized the sensitivity and specificity of urine infection in nitrate positive urinalysis.</p> <p>Materials and Methods: Urine for full examination and microscopic examination (FEME) and culture and sensitivity, were taken from patients who were scheduled for surgery. A total number of 84 urine samples showed positive result for nitrate. The types of microorganism that grew in the culture were also analysed.</p> <p>Results: The culture of the specimen of urine revealed that 26% had no microorganism growth, 40% showed mixed growth and 34% had a significant growth. In the significant growth, we further found that Klebsiella sp. and Escherichia coli were the most common microorganism (40% respectively).</p> <p>Conclusion: Positive nitrate results did not show a very high rate of significant infection. However, there is still a risk of infection. Therefore, patients should be screened before surgery to reduce the risk of infection. Preventive measures can then be taken to prevent complications.</p>

Abstract 25

Review of Fournier's Gangrene cases in UMMC

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Background: Fournier's gangrene is an uncommon infection involving the genitalia, perineum and perianal region. It carries a significant morbidity and mortality rate. It is characterized by rapid progression of soft tissue infection resulting in necrosis and tissue destruction. Patients who presented with Fournier's gangrene often are very ill and therefore, early and dedicated surgical treatment is required to treat this urological emergency.

Materials and Methods: 36 men were diagnosed with Fournier's gangrene in UMMC between January 2005 till September 2011, of which 25 medical records were available for retrospective review. An analysis to assess the patient's age, gender, symptoms, physical examination, laboratory tests on admission, surgical procedures, pathogen isolated and outcome was carried out, in the hope of identifying any prognostic indicators associated with the disease.

Results: A total of 25 patients' records were available for review. All patients were male, with a mean age of 50.8 years (range 20-83). Of the 25 patients, 40% (n=10) were Indians, 32% (n=8) were Malays and 28% (n=7) were Chinese. All these patients needed institutionalized care for an average of 30.48 days (range 6 - 124 days). 76% of the patients had underlying diabetes mellitus, 40% hypertension, 24% heart disease, 12% were immunosuppressed with medications or prolonged illness while 32% had impaired renal function and 24% had liver impairment. A swelling was the most common complaint (84%) of all presenting symptoms. This was associated with pain in 72% of patients, while fever was present in 56% of patients, and purulent discharge from the wound was found in 32%. There were also 12% of patients who had pyuria on presentation. The average time from the onset of symptoms to presentation at hospital was 7.41 days. The anatomical extent of the Fournier's gangrene were: unilateral scrotum (36%), bilateral scrotum (60%), penis (40%), suprapubic region (20%), abdominal wall (8%), perineum (32%), inguinal region (28%), urethra (20%), unilateral testis (16%), and bilateral testicular involvement (12%). All patients underwent surgical debridement, with 44% required only 1 debridement, while the other 56% had serial debridements (32% had debridement twice, 16% had debridement thrice and 8% had 4 debridements). 20% of patients needed intensive care during their admission. 56% of the patients also benefitted from a plastic surgery management. 35% was managed conservatively with dressing alone, while 7.1% had primary closure alone and 57.9% needed further split thickness skin grafting and or local flap. After surgical debridement, 68% of patients needed urinary diversion. 84% of our patients survived and were discharged home. 16% of cases succumbed to the illness, of which 12% was for multi-organ failure with sepsis, while 4% had a cardiac event precipitated by the sepsis. The organisms cultured from the wounds were 28% E. coli, 24% Klebsiella sp, 20% Pseudomonas. Other organisms isolated include Staphylococcus aureus, Group B streptococcus, acinetobacter and enterococcus.

Conclusion: In our case series, Fournier's gangrene is frequently associated with the presence of diabetes mellitus. There is a delay of a week between the onset of first symptoms and seeking medical care. Prompt and aggressive surgical debridement is the main form of treatment in addition to parenteral antibiotics. The most common site of infection is the scrotum, while the most common aetiologic organism was E. coli. Despite appropriate treatment, mortality and morbidity is still high.

Abstract 26

Clinical Characteristics and Treatment Outcome of Perinephric Abscess in HUSM : A retrospective review for the last 10 years

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Introduction: Perinephric abscesses, in the past, have been associated with significant morbidity and mortality. One of the important factors associated with the poor outcome was the delay in the diagnosis due to non-specific clinical findings and limited specificity of imaging studies.

Methods: We present our experience in the treatment and outcome of perinephric abscess in Hospital Universiti Sains Malaysia. We retrospectively reviewed all patients diagnosed to have perinephric abscesses from the year 2001 until 2010. Our series showed that perinephric abscess is a rare disease, with eleven cases documented over the period of 10 years.

Results: We have a female predominance (81.8%) of this disease with majority in their 50s. Incidence on the left side (81.8%) was higher than on the opposite side. Most of them have 2 risk factors, including renal calculi (90.9%) and diabetes mellitus (63.6%). Ninety percent of them presented with fever, and 81.8% of them had chills, rigors and urinary symptoms. Thirty six percent of patients have flank mass palpable clinically. Sixty three percent of patients with perinephric abscesses had white cell count ranging from 10-19 x 10⁹ cells/l. Urine cultures were positive in 54.4% of patients. From year 2007 onwards, all the cases suspected to have perinephric abscess on ultrasound were subjected to CT scan, which has increased the diagnostic sensitivity. Nine out of 11 patients (81.8%) were treated with combination of antibiotics and percutaneous catheter drainage of the abscess. All patients were discharged eventually with no mortality in our series.

Conclusion: The clinical characteristics of perinephric abscesses have not changed significantly but improved imaging with CT allows increased diagnostic sensitivity. With accurate diagnosis, a variety of treatments can be successful, including antibiotics alone, or combination of antibiotics with percutaneous catheter drainage. In our series, there was only one patient posted for exploration and drainage. Essentially, this should be considered if adequate drainage is not achieved percutaneously.

Abstract 27

Foley catheter's balloon leakage : Is there a difference with Normal saline or Sterile water?

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Introduction: Long term urethral and suprapubic catheterizations are common nursing interventions. Sterile water (SW) is commonly used as opposed to normal saline (NS) for Foley's catheter(FC) balloon inflation. An in-vitro study is carried out to assess the FC balloon leakage rates using SW versus NS and to assess its safety.

Methodology: The design of this research is prospective and descriptive. 14 Fr FC were used in this study consisting of 20 latex catheters(LC) (Ideal Care ®, Ideal Healthcare Sdn.Bhd) and 20 silicone catheters(SC) (Coloplast ®, Coloplast A/S Ltd). 10 FC in each arm were inflated with exactly 10cc of NS and SW respectively. These catheters were immersed in a container filled with urine and the temperature were regularized at 37oC. Urine were changed weekly. LC were immersed for a period of two weeks while SC were immersed for six weeks. At the end of the study, these catheters were deflated by using 10cc syringe and the exact volume aspirated were measured and recorded.

Results: All the catheters were successfully deflated. In SC group, the mean of residual volume of NS in the FC's balloon is 6.74cc and SW was 4cc. In the LC group, the mean of the residual volume of NS and SW in balloon were 10.1cc and 9cc respectively.

Conclusion: Using SW or NS did not affect the deflation rate of the FC balloon. But NS significantly reduce FC balloon leakage presumably due to blockage of the micro pores of the balloon by NS crystals.

Keywords: Foley catheter balloon leakage, sterile water, normal saline

Abstract 28

Break The Myth! Width of nose equivalent to the penile length?

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Introduction: Throughout human history, penile length has always been the point of interest in men. This is a prospective study to evaluate the myth whether the relationship of the width of the nasal base to the penile length has any scientific basis.

Material and methods: 101 physically normal subjects aged between 18 to 80 years old were prospectively studied during clinic consultation. Through informed consent, flaccid penile length was measured with tape measurement at room temperature. The width of the nasal base consisting of bilateral alar insertion, the nasal sill, and the columella was measured using calliper during passive process of expiration when all respiratory muscle relaxes.

Results: The mean value of the flaccid penile length was 8.1cm and the mean value of the nose width was 4.3cm. When comparing all the subjects, there were no statistically significant correlation between flaccid penile length and the width of the nose. However, when the group was divided into penile length of <8cm and >8cm, those with penile length of <8cm correlated with nasal width (Pearson's correlation index, P <0.05). There was no correlation for those with penile length > 8cm (Pearson's correlation index, P=0.376)

Conclusion: We found that penile length in men is correlated with their nasal width in men with penile length < 8cm.

Keywords: Nasal width, penile length correlation

<p>Abstract 29</p> <p>Single Centre, Single Surgeon Experience in Laparoscopic Nephrectomy</p> <p>Devindran M, Goh E H, Teoh B W, Git K A <i>Department of Urology, Penang Hospital, Penang, Malaysia</i></p> <p>Introduction: This clinical audit was conducted in Penang Hospital from November 2009 until August 2011. All laparoscopic nephrectomies that were performed by a single surgeon during this period were included in the study. We retrospectively reviewed patient notes and clinical databases to analyse specific preset parameters in reference to the pre-operative, intra-operative and post-operative period. This data were then analysed and compared with similar audits conducted.</p> <p>Methods: Patient's records, operative notes, pathology reports, outpatient cards were reviewed from November 2009 till August 2011.</p> <p>Results: There were a total of 48 patients for whom a laparoscopic nephrectomy was conducted in Penang Hospital from November 2009 until August 2011. 26 cases were performed for non-functioning kidneys, 3 cases were performed for benign tumours and 18 cases for malignant renal tumours. 27 patients were male and 21 were females. 4 patients required conversion with a conversion rate of 8.3% and 2 patients required post-operative blood transfusion (4.2%) and average blood loss (haemoglobin) was 1.1 grams and most patients were discharged by day 4.</p> <p>Conclusion: After a review of the clinical data it was found that the data from our audit has shown data that is comparable to other audits performed in worldwide dedicated urological centres. Laparoscopic nephrectomy remains a very safe and effective operative procedure with significantly low complication rates and low morbidity.</p> <p>Keywords: Clinical audit, Laparoscopic nephrectomy</p>	<p>Abstract 30</p> <p>Outcome of Acute Scrotum cases in 2 large tertiary Urological Centres in Kuala Lumpur</p> <p>Ng K L*, Ho C C K**, Sivaprakasam S*, Zainuddin ZM**, Razack A H* <i>*Division of Urology, Department of Surgery, University Malaya, **Division of Urology, Department of Surgery, University Kebangsaan Malaysia.</i></p> <p>Introduction: Acute scrotum commonly occurs in the young adults age group and often presents as a surgical urological emergency to the Emergency department. Various causes of acute scrotum can be considered but the priority of these will be the need to rule out torsion of the testes. Often these cases will require prompt surgical exploration to safely treat these patients.</p> <p>Objective: To analyse the outcome of acute scrotum cases that presented to tertiary hospitals in Kuala Lumpur and to improve our services for such distressing cases.</p> <p>Method: We conducted a retrospective analysis of all cases that presented as acute scrotum which underwent surgical exploration in 2 large tertiary urological centres in Kuala Lumpur in the last 6 years. These medical records were analysed and various parameters were reviewed.</p> <p>Results: Sixty five patients underwent surgical exploration for acute scrotal pain from 2005 to 2010. The median age of patients was 22 years (range 12-72 years). 40 patients (62%) presented with left scrotal pain while 25 others presented with right sided pain (38%). In our series, 5(8%) patients had a prior history of scrotal trauma. Ten patients(15%) had a history of previous testicular torsion. Four(6%) patients had abnormalities of their external genitalia, of these only two (3%) had history of cryptorchidism.</p> <p>34 patients (52%) underwent an emergency colour doppler scrotal ultrasound prior to surgical exploration. Of these, 24 patients (71%) had ultrasound findings suggestive of torsion of testes. 47 patients (71%) had intraoperative confirmation of torsion of testes. Of these patients, testes was salvageable in 26 patients (55%). The mean lag time to presentation in patient whom the testes could be salvaged in torsion was 7 hours, whereas in those who had orchidectomy was 72 hours.</p> <p>Conclusion: Our results reflect the similar results published elsewhere. Our salvage rate of 55% can be improved if our emergency services are prompt and directed. The mean lag time in salvageable testes of 7 hours provide continued evidence that prompt surgical exploration is mandatory.</p>
<p>Abstract 31</p> <p>Outcome of Arteriovenous Fistula by a Urology Trainee in Sabah</p> <p>T Shankaran*, K W Wong** and T B Wong*** <i>****Urology Unit and **Nephrology Unit, Queen Elizabeth Hospital, Kota Kinabalu, Sabah, Malaysia</i></p> <p>Objective: To study whether urology trainees can perform arteriovenous fistula (AvF)surgery alone to a standard comparable to a consultant.</p> <p>Patients and method: Retrospective study of all vascular accesses done over a period of one and a half years at a single centre, through theatre log books by a trainee. Patency of fistula was determined from nephrologists' case notes of patients. Patency was defined as used for dialysis for more than 6 months.</p> <p>Results: One hundred and forty one cases were used for analysis. 114 cases (80.9%) were patent. There was no significant difference in patency rate between trainee and supervision. Multivariate model shows diabetes and hypertension did not play a role in patency of AvF.</p> <p>Conclusion: This study shows no significant difference in AvF patency rate between trainee and consultant. Therefore, vascular access surgery can enhance surgical skill training in preparation for further complex cases; renal transplant and graft.</p>	<p>Abstract 32</p> <p>Development and Validation of Visual Analogue Scoring System for Macroscopic Haematuria</p> <p>Teoh B W, Goh E H, Git K A <i>Department of Urology, Penang Hospital, Penang, Malaysia</i></p> <p>Introduction: Haematuria is a common urological problem and accounts for 11% of after-hours calls to urology residents. Though it is often seen by doctors and nurses of many different medical fields, there has yet to be a way to effectively communicate the degree or severity of the haematuria. Therefore, this study aims to develop and then validate a scoring system whereby medical practitioners can describe macroscopic haematuria consistently and reliably.</p> <p>Material and Methods: Using Microsoft Office Word 2003, the Haematuria Grading Scale was created using the RGB Color Model to produce 5 different colours. Haematuria specimens were then prepared by diluting different proportions of blood in urine to develop different degrees of haematuria which were subsequently sealed in the tubing of a standard bladder drainage bag. These specimens were labeled randomly & then they were graded by 50 observers from various medical fields. These same 50 observers were asked to grade the specimens again the next day after the specimens had been relabeled randomly to assess for intra-observer variation.</p> <p>Results: From this experiment, 10 haematuria specimens were examined by 50 observers over 2 consecutive days which resulted in 1000 observations. From these observations, there was agreement in 53 – 99% of cases. Interobserver agreement was substantial with Fleiss' k coefficient of agreement of 0.61.</p> <p>Conclusion: A visual analogue scoring system for haematuria can be developed with substantial interobserver agreement to facilitate objective grading & accurate standardized communication between medical personnel.</p> <p>Keywords: Macroscopic haematuria, gross haematuria, grading system, haematuria scale</p>

Abstract 33

Histopathological changes to the urinary tract induced by oral ketamine in a rat model

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Introduction and Objective: Illegal use of ketamine as a recreational drug is widespread in the past few years. It has been linked to inflammation and fibrosis of the bladder which progresses to involve the upper urinary tract, leading to hydronephrosis and renal failure. Adulterant, such as caffeine, is often added to ketamine before it is sold in the street. We aim to study the effect of illegal ketamine to the urinary tract as compared to pure ketamine and the reversibility of these changes after ketamine cessation.

Materials and Methods: The composition of illegal ketamine was determined from a sample in a local Chemistry Department (ketamine 38%, caffeine 55%, stabilizer 7%). Groups of rats were fed with illegal or pure ketamine in three different doses, i.e. 100, 200, 300 mg/kg for four weeks. Half of the rats were sacrificed after the 4-week feeding period. The remaining rats were taken off ketamine for 8 weeks before necropsy. Histopathological examination were done on the urinary tracts to observe for any changes.

Results: Submucosal bladder inflammation was present in 29% of rats fed with pure ketamine and 22% of rats fed with illicit ketamine. Renal papillary necrosis and interstitial nephritis were only observed in rats given illicit ketamine. After ketamine cessation for 8 weeks, bladder inflammation resolved in all rats. However, nephritis remained in 40% of rats given illicit ketamine. No dose-effect relationship was established with oral ketamine and the changes in the urinary tract.

Conclusions: Short-term oral ketamine induced inflammatory changes to the urinary tract. These early changes were reversible after ketamine cessation except for interstitial nephritis. Adulterant in the illegal ketamine appeared to enhance the damaging effects of ketamine on the urinary tract. Further experiments are required to further define this phenomenon.

Erratum

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Assessment of Awareness of Diabetic Retinopathy Among the Diabetics Attending the Peripheral Diabetic Clinics in Melaka, Malaysia

In the abovementioned article, the authors' names should be

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