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### AB/02/064 (ADG-01)

#### **ANDROGEN DEFICIENCY OF AGING MEN AND DECREASE OF PULL OF STEM CELLS**

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#### **Hypothesis:**

The likelihood of the development of oncological pathology increases significantly after 40 years of age. From this time one can see a reduction in the number of pluripotent stem cells as well as in the amount (in men) of testosterone circulating in the blood. The cause-and-effect relations of these phenomena are an interesting subject of study.

#### **Methods:**

The first study group had 7 patients who were given a transplantation of donor stem cells in connection with chronic myeloleukemia. The second study group contained 5 men aging from 50 to 75 years of age; the control group contained 5 men aging from 17 to 25 years of age. All persons of the second study group had died as a result of traumatic injury. Perietal skin of the head was used for the study of persons from the second group.

#### **Results:**

In the first study group a comparison of blood samples from the patient and his close relative (mother of father) revealed the materials to be unrelated one year (or more) after transplantation, while the recipients had the same blood group as the donor. In 6 cases two types of cells were found in the recipients' cheek cells of the epitelium with a genotype of two various individuals, while in one case related cells were found which had the genotype of an individual who wasn't a relative of the mother of the recipient. Androgen receptors were found in the stem cells of 5 male donors. In the second study group persons of older age groups (as compared to the control group) revealed a regular reduction in the thickness of the papillary (by 3.1 times) and net-vein layers (by 2.0 times) of the corium, of the thickness of the fascicles of collagenous (by 1.5 times) and elastic (by 2.1 times) fibers, of the number of cambial epithelial cells of hair follicles (by 1.5 times), while the average number of fibroblasts increased (by 1.3 times), the majority of which were smaller in size, and had deformed and hyperchromic centers. Some of hair follicles were replaced by scar tissue. Androgen receptors were found when studying cells of the epidermis, the corium (fibroblasts), hair follicles, and sebaceous and sweat glands; in fact the values of the Histochemical score AR for persons of older age groups were regularly higher than the analogous values of the control group.

#### **Discussion:**

An age-related reduction in the number of stem cells breaks down the processes of regeneration of tissues, including endocrine organs. The partial androgen deficiency which develops among men of older age groups intensifies these changes. The risk of development of oncological diseases increases, while destructive changes take place in connective tissue (with a reduction in solidity characteristics), as well as in the skin and other tissues and organs among people of older age groups.

## **THE ROLE OF ANDROGEN DEFICIENCY ON THE DEVELOPMENT OF METABOLIC SYNDROME**

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### **Hypothesis:**

After 40 years of age, men have a reduction in the amount of testosterone circulating in their blood (PADAM). In order to compensate for the inadequacy of testosterone production in these men, a whole complex of compensatory-adaptive reactions is formed in the body. These reactions take place at the endocrinal, paracrine, and autocrine levels. The reduction in the level of testosterone leads to the development of a series of cardiovascular diseases. The goal of this piece of research work is to study the causes and effects of the links between PADAM and the development of metabolic syndrome among men of older age groups.

### **Methods:**

In this study 18 patients with partial androgen deficiency were analyzed. The age of these patients ranged from 42 to 73 years of age. The patients were given 40 mg of andriol (testosterone undecanoate) once each morning. All patients were put into one group, for which the research results were compared before and one month after the beginning of androgen-replacement therapy.

### **Results:**

A month after the beginning of androgen-replacement therapy the patients showed a reduction in their levels of STH (on average by 42.5%), ACTH (on average by 37.5%), cortisol (on average by 49.3%), insulin (on average by 65.3%), total cholesterol (on average by 8.2%), glucose (on average by 13.2%), and PTH (on average by 26.6%) bFGF (on average by 33.3%), IL-1 $\alpha$  (on average by 9.7%), TNF $\alpha$  (on average by 10.5%) as compared with their original values before the study began. The patients also showed a change in their levels of peroxide oxidization of lipids (basis tiobarbituate acid-active products (on average by 16.9%) and stimulated tiobarbituate acid-active products (on average by 28.4%)), as well as increased activity of elastase (of neutrophils (on average by 17.5%) and in the blood serum (on average by 63.5%)).

### **Discussion:**

The development of insulin resistance and osteoporosis among men of older age groups, which is accompanied by an increase in the levels of insulin, STH, ACTH, cortisol, glucose, PTH, and bFGF, as well by an increase in the share of fatty tissue, is due to a significant level of testicular inadequacy. The increase in proliferate activity among men with PADAM stimulates a response of anti-tumor cell immunity (increased levels of IL-1 $\alpha$ , TNF $\alpha$ , and values of peroxide oxidization). An inverse development of the given pathological processes is not possible without correction of partial age-related androgen deficiency.

**CARE AND MANAGEMENT FOR COUNTERFEIT PDE5 INHIBITORS IN JAPAN**

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**Background:**

Oral administration phosphodiesterase 5 (PDE5) inhibitors have been shown to be effective and safe treatment modality of ED, however, certain number of Japanese men feel embarrassed sharing details about ED, and feel uncomfortable to consult medical doctors about ED. Therefore, to maintain anonymity, many men obtain drugs through the internet. Present study investigated the authenticity of sildenafil citrate which could be obtained without prescription in Japan.

**Materials and Methods:**

Suspected counterfeit Viagra tablets of 100 mg were obtained from four 'personal import agents' operating Japanese internet websites. Obtained four samples were analyzed appearance and ingredient of the tablets by comparison with authentic Viagra tablets of 100 mg. Chemical composition of the samples was tested utilizing near-infrared spectroscopy (NIRS). Principal components analysis was applied to the Viagra tablet spectra to investigate similarity between four samples studied. NIR spectra were recorded from each sample, and wavelength correlation (WC) was used to compare NIR spectra. Presence of sildenafil in four samples were examined by high-performance liquid chromatographic (HPLC) analysis and compared with authentic Viagra.

**Results:**

Appearance and shape of each four samples were different from authentic Viagra. Weights of the four samples were heavier than that of authentic Viagra. IR spectroscopic analysis showed that all the samples were confirmed to contain sildenafil citrate, which is active pharmaceutical ingredient for Viagra. HPLC analysis showed chromatographic overlays of the four samples and Sildenafil Citrate Reference Material. The peak in the reference material at ~6.3-min corresponds to sildenafil, i.e. subject samples presented a peak at the retention time of ~6.3min for sildenafil, indicating the presence of sildenafil in the formulation of the four subject samples, The analysis showed that each samples contained 88%, 88%, 89% and 106% active ingredient of authentic 100mg tablet, respectively.

**Discussion:**

Viagra counterfeits are made to look like Viagra, but in the current study, all the counterfeits could be discriminated by careful inspection. Viagra counterfeits may or may not contain the active pharmacological ingredient of sildenafil citrate (2), however, IR spectroscopy showed that all the samples were almost similar but not identical to authentic Viagra demonstrating the samples contained sildenafil citrate as well as from the results of HPLC analysis.

**Conclusions:**

With the spread of the internet, the amount of Viagra imported without prescriptions are estimated to increase sharply. A considerable number of these tablets seem to be counterfeit produced under poor hygienic conditions. In order to ensure that patients have safe and effective medicines, regulators, pharmaceutical companies, and physicians should enlighten patients to avoid purchasing them through the inappropriate routes.

**References:**

1. Marumo K, Nakashima J, Murai M. Age-related prevalence of erectile dysfunction in Japan: assessment by the International index of Erectile Dysfunction. *Int J Urol* 8: 53-59, 2001.
2. Vredenburg MJ, Blok-Tip L, Hoogerbrugge R, Barends DM, de Kaste D. Screening suspected counterfeit Viagra and imitations of Viagra with near-infrared spectroscopy. *J Pharm Biomed Anal* 40: 840-849, 2006.

## **AB/06/066 (ADG-04)**

### **ERECTILE FUNCTION IN PATIENTS WITH DIABETES MELLITUS AT GENERAL INTERNAL MEDICINE CLINIC, NAGANO, JAPAN**

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#### **Introduction:**

Diabetes mellitus (DM) is one of the most important risk factors for erectile dysfunction (ED). However, only a few DM patients would consult ED clinic. We investigated erectile function in patients with DM at general internal medicine clinic, Nagano, Japan.

#### **Methods:**

IIEF 5 (international index of erectile function 5) and several DM parameters including BS, HbA1c, DM duration, number of DM complications (retinopathy, neuropathy and nephropathy) were obtained from 111 patients with DM. IIEF 5 score were compared with these DM parameters. Also, we asked if the patients would like to treat ED or not.

#### **Results:**

The mean age of 111 patients was 56.1 +/- 10.0 (30~85). The mean IIEF 5 score obtained from these patients was 13.4 +/- 7.1. Of 111 DM patients, 5 were treated with diet control, 95 with drug administration and 11 with insulin therapy, respectively.

The IIEF 5 score were correlated significantly to patients' age ( $p < 0.0001$ ), duration of disease ( $p = 0.0224$ ) and number of complications of DM ( $p = 0.0128$ ). However, the IIEF 5 score were not correlated either blood sugar ( $p = 0.2881$ ) or HbA1c levels ( $p = 0.3840$ ).

The IIEF 5 score were less than 21 in 97 patients (87.4%). However, only 13 of these patients (13.4%) wanted to treat their ED.

#### **Discussion:**

Although the patients in this study suffered from mild to moderate DM, high ED prevalence rate (87.4%) was observed. The patients' age, duration of disease and number of DM complications were considered as risk factors for ED. However, only 13.4% of them were interested in ED treatments.

#### **Conclusion:**

According to these data, the severity of ED was correlated the patients' age, and duration of disease and complication of DM. Furthermore, many patients with DM seem to have little concern to treat ED in Nagano city, Japan.

**PILOT EVALUATION OF PAROXETINE FOR TREATING HOT FLASHES AND ASSOCIATED SYMPTOMS IN NON-CASTRATED AGING MEN IN PSYCHIATRIC OUTPATIENT VISIT**

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**Background:**

As testosterone decreased with age, hot flashes probably also occur in a “ normal “aging male population. The aim of the present study was to provide prospective information on the potential utility of paroxetine for treating hot flashes in non-castrated aging men.

**Methods:**

Participants were males (55-75 years old) who had no psychotic or cognitive disorders, had their first psychiatric visit between March 2006 and May 2007. The patients had reported to experience unexpected episodes of hot flashes independent of strain which rated as moderate or severe severity according to The Aging Males' Symptoms Scale (AMS), and averaged at least 14 hot flashes per week. Men with castration therapy, major systemic diseases, neurological diseases, alcohol/opiates/related drugs were excluded from the trial. After completing daily diaries for one week without therapy, the patients were entered to receive open-label paroxetine, 10 mg daily for one week, and was increased to 20 mg daily over the ensuing four weeks. The patients completed hot flashes daily diaries and AMS throughout the study period, and checked testosterone concentrations in the baseline visit and sixth week of study.

**Results:**

Of the 32 patients, 27 men completed the six-week study period. The median frequency of hot flashes decreased from 5.6 to 1.9 per day from the baseline week to the end of study week. Hot flashes scores (frequency × average severity) decreased from 9.7 to 2.8 per day during the same period. The mean reduction of AMS scores was 46 %. Free but not total testosterone level raised in four younger men. Three men discontinued medication due to aggravated sexual dysfunction.

**Conclusion:**

The results from this trial suggest that paroxetine is generally modestly successful in reducing the frequency and severity of hot flashes in non-castrated aging men. Further controlled studies are needed to more fully evaluate the efficacy of the SSRIs for aging men with hot flashes.

**AB/14/026 (ADG-06)**

**LIQUID CHROMATOGRAPHY-TANDEM MASS SPECTROMETRY (LC-MS/MS) ASSAY FOR SIMULTANEOUS MEASUREMENT OF SALIVARY TESTOSTERONE AND CORTISOL IN HEALTHY MEN FOR UTILIZATION IN THE DIAGNOSIS OF LATE-ONSET MALE HYPOGONADISM**

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**Introduction:**

It is well known that late-onset hypogonadism in males can cause a variety of symptoms, and the differential diagnosis is relatively difficult, including psychological disorders, stress, and mood disturbances. The level of serum cortisol can be measured to reflect a patient's level of stress. Salivary hormones facilitate the evaluation of physiological hormonal actions based on free hormone assay.

**Methods:**

For the simultaneous measurement of testosterone and cortisol levels in saliva, we developed a sensitive liquid chromatography-tandem mass spectrometry (LC-MS/MS) assay.

**Results:**

On LC-MS/MS, m/z 289.2/97.3 for testosterone and m/z 363.3/327 for cortisol were regarded as the quantitative ion. Concerning accuracy and precision, the lower limit of quantity of salivary testosterone and cortisol were established as 5 and 10 pg, respectively. The measurement of testosterone and cortisol in saliva is stable for 2 days, 14 days, and 28 days at room temperature, refrigeration and freezing, respectively. Freezing and thawing and stimulation of salivation with gum chewing does not alter the measured values of testosterone and cortisol. Total, bioavailable, and free serum testosterone showed slight diurnal changes, but total and bioavailable serum cortisol showed marked diurnal changes. Salivary testosterone levels negatively correlate with age, regardless of the time of saliva collection ( $r=0.64$ ,  $p<0.05$ ). However, there is no relationship between salivary cortisol and age ( $r=0.033$ ,  $p>0.05$ ).

**Discussion and conclusion:**

LC-MS/MS allows rapid, simultaneous, sensitive, and accurate quantification of testosterone and cortisol in saliva for the diagnosis late onset hypogonadism or other hormone related disease.

**AB/16/167 (ADG-07)**

**THE EFFICACY AND SAFETY OF MICROSURGICAL PARAFRENULAR PENILE DORSAL NERVE NEUROTOMY IN THE TREATMENT OF PREMATURE EJACULATION**

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**Purpose:**

Premature ejaculation is a common consultation in urological clinic. This study is designed to compare the early outcome and postoperative morbidity of microsurgical paraforeskin penile dorsal nerve neurotomy (MPDN) and circumcision in patients suffering from premature ejaculation.

**Materials and Methods:**

Between Aug 2005 and Aug 2007, 78 patients who were diagnosed of premature ejaculation (ejaculatory latency time < 2 minutes) with stable sexual partners and without associate underlying diseases were included and were non-randomized divided into two groups. 36 patients received MPDN (study group) and 42 patients received circumcision (control group). Ejaculatory latency increased more than 50% of the baseline or 30 seconds more on patients who ejaculated at the time of vaginal penetration in 4 intercourses were considered to be effective. Intra-operative and post-operative surgical complications were evaluated too.

**Results:**

The mean ages of the study and control groups were 36.2±9.9 and 32.9±8.2 years, respectively. The effective rate in study and control group was 72% (26/36) and 14% (6/42), respectively (P<0.05). Mean increased ejaculatory latency time in study group was 5.6 minutes. The incidences of side effects were low in both groups and most of the patients can tolerated them.

**Conclusion:**

Microsurgical paraforeskin penile dorsal nerve neurotomy is an effective and safety treatment in patients with premature ejaculation.

## AB/21/076 (ADG-08)

### THE ROLE OF TESTOSTERONE AND IMPACT OF CASTRATION ON BONE MINERAL DENSITY IN MALE RATS.

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#### Introduction with Hypothesis:

Men with hypogonadism are at increased risk of osteoporosis. Osteoporotic fractures may be associated with loss of independence, premature mortality, and increased health care expenditures. Androgen deficiency may represent a key pathophysiological pathway in the osteoporosis development. Surgical or chemical castration induces a complete decline of testosterone level. Skeletal effect of gonadectomy has not been clearly established.

#### Methods:

Twenty male Wistar rats, housed in group-cages, were fed at rat chow and water ad libitum and maintained in a room with constant temperature (23 °C) on a 12-h light:12-h dark cycle. The animals were randomly assigned to one of three groups: (1) intact sham control (n=8); (2) orchietomy (n=6) and (3) administration of GnRH (gonadotropine-releasing hormone) agonist leuproterine (n=6). Leuproterine was administered subcutaneously at the baseline. The bone mineral density (BMD) was measured by densitometry with small animal software (Hologic) after 6 weeks from baseline. We evaluated lumbar spine (R1); femur (R2) and tail (R3).

#### Results (BMD in g/cm<sup>2</sup>):

	intact (sham)			orchietomy			leuproterine		
	mean	median	std dev.	mean	median	std dev.	mean	median	std dev.
R1	0,222	0,219	+/-0,0157	0,203	0,204	+/-0,011	0,207	0,206	+/-0,010
R2	0,172	0,172	+/-0,0152	0,161	0,157	+/-0,012	0,151	0,148	+/-0,014
R3	0,211	0,210	+/-0,0154	0,200	0,204	+/-0,008	0,203	0,201	+/-0,005

The intact R1,R2, R3 values were significantly higher than R1, R2, R3 values in orchietomy group ( $p<0,001$ ;  $p<0,01$ ;  $p<0,01$ ) and GnRH agonist group ( $p<0,001$ ;  $P<0,001$ ;  $p<0,01$ ).

#### Discussion:

Loss of testosterone increases the rate of bone remodeling with effect on osteoblastogenesis and osteoclastogenesis. These changes lead to the imbalance between resorption and formation by prolonging the lifespan of osteoclasts and shortening the lifespan of osteoblasts. The changes result in bone loss and subsequent development of osteoporosis.

#### Conclusions:

We have demonstrated substantial effect of castration on both cancellous and cortical bone.

**AB/23/078 (ADG-09)**

## **CORRELATION OF ERECTILE DYSFUNCTION IN HEALTHY MIDDLE-AGED MEN AND SUBCLINICAL CORONARY HEART DISEASE**

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### **Introduction with hypothesis:**

The correlation between healthy middle-aged men with erectile dysfunction (ED) and subclinical coronary heart disease (CHD) is seldom been discussed before. Exercise stress (treadmill) testing (TET) is an easy and important tool to evaluate cardiac condition. We conduct this study with TET to survey the relationship between ED and subclinical CHD in healthy middle-aged men.

### **Methods:**

Since October 2006, all patients between age of 40 to 65 visited our outpatient division due to ED were evaluated. Data including general history, International Index of Erectile Function (IIEF-5) score, body mass index (BMI), laboratory tests results were obtained. Patients with abnormal laboratory data or any history of medical, surgical or psychological illness which may affect erectile function were excluded. Then TET was performed by cardiologist to evaluate their cardiac condition (group 1). Meanwhile, all male patients within the same age range in health-screening center with the result of TET (+) were investigated with telephone interview. The same data were collected and adopted the same exclusion criteria as the group one patients (group 2). Then the 2 groups of patients were analyzed.

### **Results:**

Until May 2008, 18 patients were qualified and enrolled into group 1 and 58 patients into group 2 of this study. In group 1, mean IIEF score was  $8.89 \pm 5.76$ . Eight patients (44%) showed positive result of exercise stress testing in varying degrees. Six of the eight patients (75%) were fifties and rests of the patients (25%) were forties. There was no statistically significant difference in mean age and mean BMI between the TET (+) and TET (-) subgroups ( $p=0.911$  and  $0.312$  individually). In group 2, mean IIEF score was  $19.14 \pm 6.62$ . Within the 58 patients, 36 patients (62%) had varied degree of ED (IIEF score  $\leq 21$ ). Between the subgroups of mild, moderate, and severe ED, there was no statistically significant difference in mean age and mean BMI as well. But the subgroup of patients without ED was younger than the others (IIEF  $\leq 21$ ).

### **Discussion and Conclusions:**

In healthy middle-aged men without any mentioned risk factor of CHD, erectile dysfunction is clinically significant in the correlation with coronary heart disease. Urologist should pay more attention to deal with healthy younger patients with erectile dysfunction, even without any risk factor.

## **AB/27/087 (ADG-10)**

### **ASSOCIATION AMANG METABOLIC SYNDROME AND ERECTILE DYSFUNCTION**

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#### **Introduction:**

The purpose of this study was to determine the correlation of metabolic syndrome (MS) and erectile dysfunction (ED).

#### **Methods:**

A total 135 men with ED and 37 men without ED were enrolled. The International Index of Erectile Function 5 (IIEF5) questionnaire was used to assess the severity of erectile dysfunction. MS was defined according to the Japanese criteria. The Japanese criteria of MS are consisted two elements. At the first, abdominal circumference is essential items. And two out of three (hypertension, Dyslipidemia and hyperglycemia) are selection items. We evaluated BMI, abdominal circumference (AC), hypertension (HT) and hyperglycemia (HG). The mean age of ED(+) group was 51.6 and 40.7 for ED(-) group.

#### **Results:**

1) IIEF5 was 9.39 in the ED(+) / BMI $\leq$ 25 group and 7.96 in the ED(+) / BMI $>$ 25 group, on the other hand 18.3 in the ED(-) / BMI $\leq$ 25 group and 21.4 in the ED(-) / BMI $>$ 25 group. 2) IIEF5 was 9.2, 9.1 in the ED(+) / AC $\geq$ 85cm group, ED(+) / AC $<$ 85cm and 20.0, 21.0 in the ED(-) / AC $\geq$ 85cm group, ED(-) / AC $<$ 85cm group. 3) IIEF5 was 8.4, 9.6 in the ED(+) / HT(+) group, ED(+) / HT(-) and 20.1, 20.2 in the ED(-) / HT(+), ED(-) / HT(-) group. 4) IIEF5 was 6.8, 9.8 in the ED(+) / HG(+), ED(+) / HG(-) group and 21.3, 19.3 in the ED(-) / HG(+), ED(-) / HG(-) group.

#### **Conclusion:**

In this study suggest that ED seems to be associated with BMI, HT and HG.

**AB/28/084 (ADG-11)**

**SPONTANEOUS SOMNOEJACULATION (SSE)- A NEW ENTITY OR A REVIEWED PATHOLOGY?  
- A CASE REPORT**

Shaiful Bahari Ismail, Tuan Long Tuan Mustakim, Shamsul Bahary Mohamad, Mohd Ariff Ikram, Mohamad Abir, Imran Ahmad

**Case Summary**

Mr A, a 25-year old, Indian, male, single, a postgraduate student, non-smoker and a strict vegan. His problem started about 3 years ago when he had spontaneous ejaculation during sleeping, daytime or nighttime. It occurs few times in a week. It causes him to feel extremely tired upon waking up. It was associated with specific positions of sleep for example sleeping in prone position will definitely causing SSE. He sometimes needs to put object e.g. chair in between his leg before he goes to sleep to avoid other positions that might cause ejaculation. He believed that the condition worsened if he takes a lot of caffeine. It was not associated with wet dreams. He denied of feeling 'released' after the ejaculation. Mr. A had sought traditional healers and some 'medications' without success. He claimed that he has no sexual thoughts of having sexual intercourse or masturbation. He has no history of substance abuse. He was anxious about his condition, however, there was no symptom of depression.

Examination revealed a medium size male with weight of 50kg and height of 172cm. The vital signs were stable. His genitalia and other systems were essentially normal. Based on the history and physical examination, he problem was most likely psychological in origin. Patient was then started on T Fluoxetine 20mg OD after detailed discussion and counseling. He was also advised to do masturbation once or twice per week as part of the treatment in which he complied and reduced intake of caffeine. Follow up at one, and three months later showed marked improvement whereby SSE occurs very occasionally. At six month it was almost disappeared. The medication was tapered down and eventually was off in the subsequent 3 months. Last follow up revealed a very happy man with no more complaint of spontaneous ejaculation during sleep.

**RISK FACTORS INFLUENCING ERECTILE DYSFUNCTION IN AGING MALE**

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**Introduction:**

The prevalence of erectile dysfunction (ED) is common and bothersome problem in aging male. Recently there have been a considerable number of studies in Late-onset Hypogonadism syndrome (LOH) and metabolic syndrome (MS), however, little is known about involvement in ED. The purpose of this study is to assess the relationship of ED onset to the existence of LOH and/or MS.

**Methods:**

In 153 men mean age 64.8 years (range 42~84), International Index of Erectile Function (IIEF5) questionnaire, serum free-testosterone (T), glucose tolerance, lipid metabolism, blood pressure, and waist circumference were examined. ED and LOH was diagnosed by IIEF5 score  $\leq 11$  and serum free-T  $< 8.5$  pg/ml, respectively. MS was determined by diagnostic criteria in Japan of 2005, namely, central obesity and two of the following: impaired glucose tolerance (IGT), hypertension (HT), and dyslipidemia. Logistic regression was used to test univariable and concomitant multivariable these factors associations with the occurrence of ED. If their univariable P value was less than 0.25, variables were considered for the multivariable models. The data relationship between ED and age were also analyzed using Pearson's correlation coefficient.

**Results:**

Simple logistic regression methods revealed that IGT was a significant ED risk factor ( $P=0.036$  and OR =2.346). Multiple logistic regression methods among HT, IGT, and LOH also demonstrated that IGT was a significant risk factor ( $P=0.042$  and OR =2.301). Logistic regression analysis in patients without IGT showed that LOH was a significant risk factor ( $P=0.033$  and OR =5.623). Neither of HT, dyslipidemia, nor central obesity, as to MS related factors, was a significant risk factor. Moreover there is a highly significant statistical negative correlation between IIEF5 score and age ( $r=-0.457$  and  $P<0.001$ ).

**Conclusion:**

These results of present study suggested that IGT was only independent ED risk factor but LOH was also risk factor after exclusion of patients with IGT.

**AB/01/XXX (GEN-01)**

**PROFILE OF DRUG UTILIZATION AMONG GERIATRIC PATIENTS ATTENDING A CARDIOLOGY CLINIC IN MANGALORE, INDIA**

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Dr. K. Mukund. MD.DM. Omega hospital and Mangalore Heart Care Center, Mangalore

**Objective:**

To describe and analyze the profile of prescriptions and drug utilization among geriatric patients attending a cardiology clinic, for one year.

**Methods:**

Two hundred and twelve prescriptions for geriatric patients, among all the prescriptions (1438) issued to patients, during January to December 2007 in a cardiology clinic, Mangalore, South India, were analyzed.

**Results:**

During the study period, there were 212 prescriptions for geriatric patients. Those aged 70-74 years formed the largest (42.45%) group. Polypharmacy of 4 or more drugs were found in 71.77% of prescriptions. Diabetes mellitus was associated with 29% of 178 prescriptions for ischemic heart disease with hypertension. Among 962 drug encounters, 436 were from the WHO approved essential drug list (2007). Anti-platelets (73.1%) were the most often prescribed drug followed by beta blockers (55%), nitrates (55%). Average cost of medications /day was Indian rupees 21.64 (0.51 US dollars). Cost of diabetic medications/day was Indian rupees 6.03 (0.14 US dollars).

**Conclusion:**

Study represents current prescribing trend in cardiovascular and anti-diabetic drugs among elderly patients. It was found that most of the geriatric patients were prescribed more than 2 drugs as nearly 70% of the patients were suffering from 2 or more diseases. Higher prevalence of use of clopidogrel – aspirin combinations (23.60%) and statins (41.03%) added substantially to the cost of medications (18.73%) in cardiovascular diseases.

**SPECIFIC HUMAN RECOMBINANT ANTIBODIES AS NEW TOOLS FOR IMMUNOTARGETING APPROACHES**

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**Background:**

Recent advances in antibody engineering have made possible the production of human recombinant antibody fragments in phage display vectors in the form of single chain fragment variable (scFv). It is possible to select scFv against a desire antigen using panning process. The scFvs have been widely used in cancer immunotherapy. Also have the potential to be used for prevention and treatment of infectious disease. HER2/neu is a tumor associated antigen which is overexpressed in a number of human cancers of epithelial origin. Binding of antibody to its extracellular domain blocks HER2/neu signaling and proliferation of tumor cells. Here we describe the development of anti- HER2/neu scFv as a new agent which could play a prominent role in human's health.

**Methods:**

Antibody engineering technology was applied to lymphocyte mRNA of a non immune donor and a scFv library was constructed and selected against HER2/neu. The libraries were selected against HER2/neu epitopes and reacted with the epitopes in ELISA and dot immunoassay. The chains VH/linker/VL of the selected scFvs were amplified and cloned into TOPO TA vector. The positive clones were analyzed by PCR. After purification of amplified DNAs, they were sequenced using a dye termination method.

**Results:**

The VH regions of the specific anti-HER2/neu scFv libraries were derived from VH<sub>3</sub> which were assembled with VKII and VKIII gene families. The amino acid alignment of heavy and light chains of the antibodies with VH and VL gene families revealed specific changes in some amino acids that represent binding specificity of the antibody molecules.

**Conclusions:**

The highly specific anti-HER2/neu scFvs show potential for the development of a new generation of therapeutic anti-HER2/neu reagents. The structural studies that display the compositions of complementarity-determining regions (CDRs) of specific antibodies would be helpful in the creation of synthetic antibodies to a key antigen. The scFvs which are high affinity binders can be considered as new agents for immunotherapy targeting in order to prevent and treatment of human diseases.

## **AB/15/124 (GEN-03)**

### **SELECTION CRITERIA FOR INTRA-UTERINE INSEMINATION (IUI) CYCLES**

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#### **Introduction:**

Quantitative assessment of semen parameters is necessary in identifying the fertility status of the men. Sperm-Hyaluronan Binding Assay (HBA) offers the qualitative and functional assessment of the sperm, using the HYDAK® HBA, a counting device coated with an immobilised monolayer of hyaluronan. Sperm that are capable of binding to hyaluronan, had been shown to have high genomic integrity and decrease in the frequency of chromosomal aneuploidies and diploidies.

#### **Objectives:**

To assess semen parameters and HBA as selection criteria for patients requiring intra-uterine insemination (IUI) procedure that would likely increase chances of pregnancy.

To assess semen parameters and HBA as selection criteria for patients requiring intra-uterine insemination (IUI) procedure that would likely increase chances of pregnancy.

#### **Methods:**

133 female subjects of less than 38 years of age were recruited from 2005 to 2007. The couples consented to participate in this study. IUI procedure was performed either on the day of spontaneous luteinising hormone surge or on the following day, after hCG administration when one of the follicles measured  $\geq 18$ mm was present.

The male partners were required to produce their semen samples on the day of IUI. Semen volume was measured. An aliquot of the semen was assessed for progressive sperm motility, concentration, Strict Criteria normal morphology and %HBA. The remainder of the semen was processed for IUI procedure.

#### **Results:**

10.5% (14/133) pregnancies were achieved. Sperm concentration was significantly higher in the pregnant compared to non-pregnant group (median, 93.5 vs 56.0 million/ml), ( $p < 0.05$ ).

#### **Discussions:**

The pregnant group of subjects had minimum HBA of 34% and sperm concentration of 12 million/ml. 19.3% of the non-pregnant subjects had less than the minimum HBA & sperm concentration values while all of those pregnant, satisfied the minimum criteria.

#### **Conclusions:**

Selection of patients for IUI procedure using HBA  $\geq 34\%$  and sperm concentration  $\geq 12$  million would likely increase the chances of pregnancy outcome. Patients who did not meet these criteria will be recommended for more intensive assisted reproduction programme.

## **AB/24/016 (GEN-04)**

### **MAJOR MEN CONCERN AS THE MARKER FOR CARDIOMETABOLIC SCREENING**

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#### **Introduction:**

Men with erectile dysfunction (ED) often have underlying cardiovascular and metabolic risk factors. Men with testosterone deficiency syndrome (TDS) were also found to have higher co-morbidities. Metabolic syndrome was found to be associated with lower urinary tract symptoms (LUTS). We aimed to determine whether ED, TDS, and LUTS, which constitutes major men's concern (MMC) were associated with cardio-metabolic morbidities.

#### **Methods and Materials:**

This was a community-based cross sectional study among randomly selected urban men aged > 40 years old. Trained doctors assessed participants using structured questionnaires that included demographic data, medical history including self reporting ED, IIEF-5, IPSS, clinical examination (blood pressure, weight, height and waist circumference) and laboratory investigations (fasting blood sugar, serum fasting cholesterol profile).

#### **Results:**

1046 men participated in the survey corresponding to 62% response rate. The mean age of the participants was 55.8(SD ± 8.4) years. There was 48.9% Chinese, 34.5% Malays and 14.8% Indian. The prevalence of MMC was 53.5% and 91.1% of them had at least one cardio-metabolic morbidity [viz abdominal obesity, hypertension, diabetes, hypercholesterolaemia or self-reported coronary heart disease] compare to 83.0% of men without MMC (p<0.001). There were higher prevalence of central obesity (64.8%), hypertension (54.5%), diabetes (24.8%) and self-reported coronary heart disease (16.7%) among men with MMC compare to men without MMC. Self-reported LUTS, self-reported ED and hypogonadism were significantly associated with the collective cardio-metabolic morbidities. However, only self-reported ED (OR 3.40; 95% CI: 1.61-7.19) and hypogonadism (OR 3.59; 95% CI: 1.71-7.53) were independent predictors of the collective cardio-metabolic morbidities.

#### **Discussion:**

Men with ED, TDS or LUTS have high prevalence of cardio-metabolic morbidities. This is especially pronounced in men with ED and TDS. It is worthy to screen men with MMC because it entails identification of cardio-metabolic morbidities. These MMC may be promoted to encourage men to seek preventive healthcare.

## **AB/29/084 (GEN-05)**

### **KNOWLEDGE OF MEN'S HEALTH AMONG FINAL YEAR MEDICAL STUDENTS IN UNIVERSITI SAINS MALAYSIA (USM), KUBANG KERIAN, KELANTAN, MALAYSIA**

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<sup>2</sup>Monash University, Melbourne, Australia

#### **Introduction:**

The objective of the study is to determine the knowledge of the final year medical students in USM on Men's Health.

#### **MATERIALS AND METHODS:**

A cross-sectional study conducted in March 2007, one month prior to their final exam. The sampling frame was all final year medical students in USM. The participation in this study is voluntary and it is anonymous.

#### **Research Tools:**

The questionnaire was developed based on the topics related to male sexual and reproductive health such as anatomy and physiology of male reproductive system, male sexual dysfunctions, sexually transmitted infections/HIV, male infertility, testicular tumours, prostate disease and androgen deficiency. Small focus group discussion was conducted with 10 fourth year medical students in Monash University, Australia. Subsequently the questionnaire was sent to various experts including to the Andrology Australia (AA) for the feedbacks prior to distribution to the students

#### **RESULTS:**

Total of 74/170 students participated in the study giving the response rate of 44%. The participants' age range for both groups was from 23 to 28 years old.

The results showing low and high knowledge were in table 1 and 2

#### **CONCLUSION:**

There is still gap in knowledge on Men's Health among the final year medical students in the Universiti Sains Malaysia.

## **AB/30/091 (GEN-06)**

### **PSYCHOLOGICAL DISORDERS IN PATIENTS WITH DIABETES MELLITUS**

Jamal Al Hamad

Diabetes Mellitus is very common worldwide. Prevalence ranges between 5% and 24%. Diabetic patients, as those with other chronic diseases are more prone to have psychological disorders than normal population. The spectrum of psychological disorders in diabetic patients range from minor psychological reaction to severe anxiety and depression. Presence of psychological disorders may interfere with blood sugar control and management of such disorders is mandatory in order to achieve good control of blood sugar. Management of psychological disorders starts on the first day of breaking the bad news of diabetes and extends throughout the patient followup appointments.

**AB/09/136 (GER-01)**

## **OBESITY AND ITS CORRELATED FACTORS IN MEN ABOVE 40 YEARS OF AGE IN AN URBAN MALAYSIAN POPULATION**

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### **Introduction:**

Obesity is increasing at epidemic rates globally, affecting approximately 1.1 billion adults. In developing countries in Asia, the rates of obesity has tripled in the past 20 years concurrently with increased caloric intake and reduced physical activity. In Malaysia, adult obesity rates exceed 8%. Obesity leads to adverse metabolic effects and debilitating health diseases. The economic cost is substantial, with an attributable increase of up to 8% in total health care spending. Numerous health parameters are associated with obesity in the aging male.

### **Methods:**

1665 men aged  $\geq 40$  years in Subang and Kelana Jaya in the Klang Valley, Malaysia were invited to participate in a community based men's health study in 2006. A total of 1046 men responded and completed the study to determine the correlating factors with obesity and central obesity. One-to-one interviews were conducted using validated and structured questionnaires including demographic data, self reported medical illness, sexual and health attitude and behavior, IIEF and IPSS scoring. A thorough serum biochemical assessment was conducted, including fasting blood sugar, lipid profile and PSA. Anthropometric measurements were recorded. Obesity was determined to be BMI exceeding 25 and central obesity ascertained as having a waist circumference  $\geq 90$  cm.

### **Results and discussion:**

There was an obesity rate (BMI) and central obesity rate of 51.7% and 56.1% respectively. Obesity had statistically significant association with coronary heart disease ( $p=0.033$ ), self reported diabetes ( $p<0.001$ ) and hypertension ( $p<0.001$ ), serum triglycerides ( $p<0.001$ ) and serum testosterone ( $p<0.001$ ), whereas central obesity was significantly associated as well with coronary heart disease ( $p=0.008$ ), self reported hypertension ( $p<0.001$ ) and diabetes ( $p<0.001$ ), serum triglycerides ( $p<0.001$ ) and serum testosterone ( $p<0.001$ ). Only central obesity was significantly associated ( $p=0.005$ ) and had linear correlation with IIEF score (Pearson's,  $R = -0.081$ ). Logistic regression study controlled for age showed that both obesity and central obesity were each independently associated with self-reported hypertension and diabetes, triglycerides and serum testosterone. Age was an independently associated variable for obesity.

### **Conclusion:**

Obesity by BMI (Asian Criteria) and central obesity are each significantly associated and correlated with self reported diabetes and hypertension, serum triglycerides and testosterone. Central obesity was significantly associated and had linear correlation with IIEF score. Age was an independent variable for obesity. Further research will be required to define these variables in efforts to overcome obesity.

**SYMPTOMS OF AGING AND ANDROGEN DEFICIENCY IN MIDDLE-AGED AND OLDER MEN IN PSYCHIATRIC OUTPATIENT VISIT**

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**Background:**

The manifestations of androgen deficiency may be attributable to multiple etiologic factors, i.e. a consequence of aging, depression and use of certain medications. Serum free testosterone measurement is considered to be the gold standard for the diagnosis of hypogonadism but it is not available to all suspected subjects. Androgen Deficiency in Aging Male Questionnaire (ADAM) and Aging Male's Symptoms Scale (AMS) could be used as a surrogate to biochemical determinations. In this study, we sought to find the prevalence of androgen deficiency and/or aging symptoms in age-specific psychiatric outpatient men, and to examine whether mood symptoms were associated with such manifestations of androgen deficiency.

**Methods:**

176 consecutive psychiatric male outpatients aged 40 to 79 who were non-psychotic, bipolar disorder, cognitive disorder, and psychoactive substance abuse were enrolled to complete ADAM, AMS and Hospital Anxiety/Depression Scale (HADS). Demographic data were obtained through clinic interview. Statistical analyses were carried out using SPSS 13.0.

**Results:**

The crude prevalence rates of ADAM and AMS were 93.2%, 93.7% (psychological), 98.3% (somatic) and 94.3% (sexual) respectively. Age and body weight (and BMI) didn't correlate with any aging symptoms except that sexual complaints were prevalent in the elder population. The male patient whose wife was elder had reported complaints more on sexual dysfunction. Regression analyses showed depression, anxiety positively contributed to the severity of both on ADAM and AMS scoring.

**Discussion and Conclusion:**

Aging symptoms are prevalent in population of middle-aged and older psychiatric outpatients. Psychiatric treatments should improve psychological and somatic complaints. However, sexual dysfunction might remain due to the nature of aging process or existing mental disorders, and very often, effects of psychotropic medication. Mood disorders and androgen deficiency are both frequent in men older than age 40 years. In evaluating depression and anxiety in aging men, psychiatrist should be aware of this relationship and request laboratory analysis of testosterone when indicated.

## **AB/19/014 (GER-03)**

### **AGING MEN IN EMPTY NEST AND THEIR HEALTH-RELATED QUALITY OF LIFE**

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#### **Introduction:**

Men suffer most when children leave home, when they realized they are running short of time to take an active role in fatherhood. The period when children leave home, and when the parents are on average between 55 and 60 years old, is described as the “empty nest” phase. This paper assessed the prevalence of aging Malaysian men in the empty nest phase, and its association with their health-related quality of life and its associations with the sociodemographic factors.

#### **Methods:**

This was a population survey using the electoral poll listing in an urban community in Malaysia as the sampling frame. Five hundred men aged 50 years and above were selected randomly to participate and 351 men agreed (response rate 70.2%). The 12-Item Short-Form Health Survey (SF-12) was used to assess quality of life. Sociodemographic information, lifestyle indicators and medical conditions were collected from respondents via a face-to-face interview. An aging man was classified as empty nest if he has at least one child, and none of his children was staying with him.

#### **Results:**

The prevalence of men with empty nest (EN) was 14.8%. They were significantly older than men without empty nest phase (no-EN) (mean age 61.9 + 6.9 vs. 57.5 + 6.9,  $p < 0.001$ ). There was no significant difference between the two groups in their marital status, economic and general health status. The composite scores of SF-12 in EN in both physical (33.2 + 6.3) and mental domain (34.9 + 5.0) were lower than the reference norm scores of 50 in the US population. However, there was no significant difference in the specific domains between EN and no-EN, except for social function, where EN had a significantly lower score. EN nevertheless received more social support from their children supporting the lower score of social function. There was no significant difference in depression scores and home care preferences in later years between EN and no-EN men.

#### **Conclusion:**

The prevalence of men with empty nest phase was relatively low in this urban community and their quality of life was not significantly different from the other aging men who live with their children, possibly due to good social support.

## **AB/32/168 (GER-04)**

### **SKIN CARE FOR AGING MALE**

Kristijanto Adimoelja

Naval Hospital Dr. Ramelan / School of Medicine of Hang Tuah University

Aging male skin needs special skin care products. Male skin differs from female skin especially in aging male. Various skin care for male are available in market but they do not yet especially made for aging male skin conditions. Inappropriate skin care for aging male could lead to skin problems some could cause skin diseases. Histologically male skin is thicker and firmer than female skin. It is also richer blood supply and oilier than female. Therefore special male skin care products are manufactured for this special condition. But male skin tend to age without as many deep-set wrinkles and fine line as female. Aging male skin is mostly drier and more dehydrated. We can also find more benign skin tumor than aging female has. Therefore special skin care products for aging male should be elected more carefully than usual men skin care available in the market.

## SELF-REFERRED PATIENTS IN A MEN' S HEALTH JOINTED CLINIC: CHARACTERISTICS AND PSYCHOLOGICAL SCREENING

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### Objective:

To analyze the characteristics of men who visited a "Men's Health Jointed Clinic" in a Taiwanese medical center staffed by psychiatrists, urologists and Chinese medicine experts.

### Methods:

Based on the subject of "Men's Health" focusing on andropause, sexual dysfunction, infertility, low urinary tract syndrome (LUTS), and male mental disorders, 160 consecutive male patients were evaluated from June to Sep 2008. All subjects visiting the Men's Health Jointed Clinic as their first visit and their own completing a self-report registration form detailing basic demographic information, reasons and pathway for help seeking, and questionnaires assessments including ADAM (Androgen Deficiency in Aging Male), AMS (Aging Male's Symptoms Scale), BDI (Beck Depression Inventory), BAI (Beck Anxiety Inventory), IIEF-5 (International Index of Erectile Function), and SFS (Situational Fatigue Scale). Sex hormones assays were conducted as optional basis determined by clinical need. Statistical analyses were carried out using SPSS 13.0.

### Results:

The patients were studied aged 19 – 86 yr ( $46.5 \pm 11.5$ ). Andropause was complained with increased age. Sexual complaints were more prevalent in patients aged over 60. 60% of younger men reported affective complaints rather than andropause or urologic problems. Due to sexual dysfunction, 59.4% and 42.5 % of patients had previously sought help from Chinese medicine and psychiatry clinic, respectively. Two-thirds patients had LUTS and affective problems received over-the-counter medicine. The AMS total score was higher in both the youngest and eldest group. Both the youngest and aged over 50 groups reported moderate to severe erectile dysfunction. Most patients reported sexual dysfunction attended three specialists' clinics. The patients who visited Chinese medicine clinic reported more serious symptoms in IIEF-5 and physical fatigue assessments. AMS-SEX assessment might be the most important determinant to diagnose andropause ( $P=0.005$ ).

### Discussion and Conclusion:

Most aging male are not satisfied with their sexual function, but that preserve psychological and somatic functions. Psychological and somatic PADAM symptoms are independent of physiologic aging. Among all subjects in "Men's Health Jointed Clinic", psychological distress noticed in reality. The male patients considered their "men's health problems" not only focused on andrologic but mental aspect.

**AB/18/049 (PSY-02)**

## **THE CHARACTERISTICS, AND PSYCHO-SOCIAL APPROACH IN MALE PERPETRATORS WITH DOMESTIC VIOLENCE IN TAIWAN: BEFORE SENTENCE IDENTIFICATION**

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### **Background:**

The law for domestic violence prevention in Taiwan had been established for the past 10 years and permits the domestic perpetrator to be prosecuted. Research has identified that 92% of domestic violence perpetrators are male and most offenders cite external causes for their depression, for example, to blame or assault others. In this study, we sought to understand the clinical characteristics and psycho-social risks in the male perpetrators with domestic violence.

### **Methods:**

Between Aug 2006 and July 2008 in Taoyuan County, Taiwan, court judges referred 155 domestic violence male perpetrators to psychiatric evaluation according to the offender relocation program before sentence identification. Demographic data and crime events were obtained by clinical interview. psycho-social approach was administered using the BDI-II (the Beck Depression Inventory- II) Depression scale and Domestic Violence and Controlling Behavior Checking List. Descriptive statistics were shown to examine the characteristics of the study sample by using SPSS12 for Windows.

### **Results:**

A total of 155 subjects completed interview and 79 volunteer filled in BDI-II scale. The average age was 41.2±9.9 years. 49% of all were aged over 40. The average educational level was 11 years. One-third subjects were jobless status. Among the perpetrators who had previous criminal record (40/155, 26%), the marital violence was the predominant type (74.2%), 87.1% involved physical abuse, only 7.1% were confessed to verbal abuse. Approximately one-fourths (23.9%) subjects had used implements and 56.8% were drunk on alcohol at the time of their offending. The reason behind the violent conflicts were, drinking (54.8%), personality-related (42%) and relationship (23.2%). There was no significant difference in the type of violence used, age of offender and involvement of alcohol compared with Kaohsiung County's research in 2005. 41.8% of respondents reported depression on BDI-II assessment and 19% suffering from major depression. All subjects aged 20-30 were assessed as depression, and one of two aged over 60 considered as major depression. The average scores of "feeling of guilty" and "be punished" on BDI- II in the group of age between 50-60 were lower than average.

### **Discussion and Conclusion:**

The characteristics, personality trait and related factors vary in exploring the perpetrator involved in domestic violence. This current study has found that the age groups with the highest risk of major depression are those aged between 20-30 and those ages over 60. The results from this study can be provided to understand offender's characteristics and psycho-social risk factors before sentence identification.

**THE CHARACTERISTICS OF ALCOHOL-RELATED BEHAVIORS AND QUALITY OF LIFE IN THE MALE OFFENDERS OF DRUNK DRIVING IN TAIWAN**

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**Background:**

Drunk driving is a severe problem and it always causes some consequences, including disabled injury or death. In many countries, the government set a lot of laws or programs for offenders to prevent the rate of dangerous behaviors. But no specific ways in better effectiveness were reported. Another, men are in a large part of offenders. This study hopes to provide some characteristics of the male offenders about alcohol use and life style for further plans or policies to get good response.

**Methods:**

A total of 228 offenders were determined by the court for cognition-education program, besides the forfeits, according to the Law of Public Danger. All of them were first or second times to break the law. And they received the program around half of day independently in 6 times between July 2008 and September 2008. There are about 30 to 40 persons per time and they all performed the test after lessons. We used three different tools for evaluating their condition about demographic data, alcohol use and life style, including self-report form, alcohol use disorder identification test (AUDIT) and a Taiwanese version of the SF-36 health survey.

**Results:**

Of the 228 participants, 21 women were excluded and 46 men didn't finish the tools. The demographic data of residual 161 men are mean age is 38.04 years old and mean educated-year is 12.12 years. And 82 men (50.9%) are in working-class and 84 men (52.2%) are under married status. About medical management, there are only 1.8% (n=3) men even visited psychiatric service and 22.3% (n=36) men got the treatment from other departments. According to self-report, 45.3% (n=73) men agreed the use of alcohol is a problem for themselves and 47.8% (n=77) men mentioned others thought alcohol affected their life. In AUDIT, 51.5% (n=83) met the level of dependence condition and 21.7% (n=35) is harmful condition. About SF-36, bodily pain, physical health, vitality and mental health showed lower than normal status among 8 items.

**Conclusion:**

The results from this analysis suggest around the male offenders of drunk driving although they thought their quality of life were affected by alcohol, but no aggressive managements were performed. Further controlled studies should be needed to evaluate the motivation about improving quality of life during the male offenders.

## **AB/07/070 (URO-01)**

### **THE TRANSOBTURATOR MALE SLING SYSTEM FOR POSTPROSTATECTOMY INCONTINENCE – ONE YEAR EXPERIENCE WITH A NOVEL TECHNIQUE**

Dr. Ralf Anding, Dr. Ralf Thiel

#### **Introduction with Hypothesis:**

The transobturator male sling system was developed by Rehder and Gozzi in Austria and introduced in 2006. The concept of the device comprises the suspension of the bulbar urethra to regain the integrity of the external sphincter after radical prostatectomy in contrast to different devices functioning through obstruction.

#### **Methods:**

From 5/2007 to 7/2008 35 patients with moderate to severe incontinence were operated with the AdVance male sling system (American Medical Systems). 32 patients had a radical prostatectomy (25 open, 7 laparoscopic, 6 with adjuvant irradiation), 2 had a TURP, 1 had a TULIP. Average values for patient age, operative time, and hospital stay were 68 years, 44 minutes, and 4 days, respectively. Several patients had prior anti-incontinence surgery (6 bulking agents, 2 stem cells, 2 artificial sphincters).

#### **Results:**

After surgery the stamey grade shifted from II-III° (97,1%) and 0-I° (2,9%) to II-III° (40,0%) and 0-I° (60,0%). Pre- and postoperative pad tests showed a significant reduction from 108g to 25g on average. We observed a reduction of pad use from 1-2 (5,7%), 3-6 (62,8%), 7-10 (28,6%) preoperatively to 0 (34,3%), 1-2 (31,4%), 3-6 (17,2%), 7-10 (14,3%) 3 months postoperatively. The pad use remained nearly unchanged after 6, 9, and 12 months. No major complications were seen after surgery. 4 patients had temporary urinary retention. 3 patients needed repeated surgery for repositioning of the sling. Results were significantly better in the subgroup of patients with incontinence after radical prostatectomy only (22).

#### **Discussion:**

With the suspension of the posterior urethra a lengthening of the sphincteric extent, a circular contraction, and a better coaptation without compression of the urethra is achieved. Sphincteric deficiency, adjuvant irradiation or prior anti-incontinence surgery deteriorates the outcome. Also, patients after TURP were no ideal candidates for this procedure.

#### **Conclusion:**

With proper patient selection the AdVance male sling system is a minimally invasive, safe, and durable technique for correcting postprostatectomy incontinence.

**DOES HORMONE REPLACEMENT THERAPY FOR LATE-ONSET HYPOGONADISM AFFECT THE LOWER URINARY TRACT SYMPTOMS IN JAPANESE PATIENTS?**

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**Introduction with Hypothesis:**

Hormone replacement therapy (HRT) is performed for the treatment for patients with late onset hypogonadism (LOH). We previously reported the efficacy of HRT with testosterone enanthate (TE) and human chorionic gonadotropin (hCG) for Japanese LOH patients. There is no direct correlation between serum testosterone levels in men and the risk of developing prostate cancer, however, there are no reports associated with voiding symptoms after HRT in the Japanese population. This study examined whether HRT for Japanese patients of LOH affected lower urinary tract symptoms (LUTS).

**Methods:**

A total of 21 patients with LOH were included in this study. Seventeen patients were given injections of 125mg of TE intramuscularly every 3 weeks, and 4 patients were given 5000 IU hCG. Voiding function and related quality of life were evaluated with International prostate symptom score (IPSS) and King's health questionnaire (KHQ). Changes of IPSS, IPSS quality of life (QOL) index and KHQ, before HRT and 3 months after HRT, were evaluated. Statistical comparisons were made using the Wilcoxon signed rank test,  $P < 0.05$  was considered statistically significant.

**Results:**

Total IPSS and QOL index were not significantly different from  $7.43 \pm 6.56$ ,  $2.71 \pm 1.74$  at baseline to  $8.29 \pm 6.24$ ,  $2.91 \pm 1.13$  after 3 months. There were no significant differences in any of the nine categories of KHQ.

**Discussion:**

HRT is a first-line treatment for LOH patients; however, HRT should be carefully considered in order to evaluate potential risks and benefits, as testosterone affects multiple organs including the lower urinary tract. This preliminary report showed for the first time that HRT in Japanese LOH patients had no short-term effect on LUTS.

**Conclusion:**

In this preliminary study, the results suggested that HRT for LOH had no short-term effects on patients with LUTS.

## **AB/10/136 (URO-03)**

### **PROSTATE SPECIFIC ANTIGEN (PSA) MEASUREMENTS IN URBAN MALAYSIAN MEN AGED 40 YEARS AND ABOVE AND ITS CORRELATIONS**

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#### **Introduction:**

Prostate specific antigen (PSA) is a 34 KD serine protease that is produced by the prostate gland. Serum levels may be affected by many factors. Elevated levels will suggest prostatic enlargement or disease. Recent evidence has shown that metabolic factors may affect its levels. PSA levels in the aging male may point to systemic disorders and be a marker for other diseases.

#### **Methods:**

To determine the correlating factors with PSA, 1046 men aged 40 years and above (range of 40 -93 years) were recruited as part of a longitudinal cohort studying an urban population residing in Subang and Kelana Jaya in Klang Valley, Malaysia in 2006. One-to-one interviews were conducted using validated and structured questionnaires including demographic data, self reported medical illness, sexual and health attitude and behavior, IIEF and IPSS scoring. A thorough serum biochemical assessment was conducted, including fasting blood sugar, lipid profile. Anthropometric measurements were also recorded. PSA levels were divided into two groups of either  $\leq 4$  or  $>4$  ng/ml. Benign prostate enlargement was assessed based on symptoms and history (reported) or IPSS score  $>7$  (unreported).

#### **Results and discussion:**

93.1% of respondents had a PSA level of  $\leq 4.0$  ng/ml. PSA was found to be significantly associated with benign prostate enlargement ( $p=0.027$ ), self reported erectile dysfunction ( $p<0.001$ ), IIEF scores ( $p=0.001$ ) and IPSS scores ( $p=0.012$ ). There was no statistical association with metabolic syndrome, waist circumference or BMI, serum testosterone, or coronary heart disease. Logistic regression showed significant correlation with IIEF (OR 2.5; 95% CI 1.4-4.4) and self reported erectile dysfunction (OR 2.8; 95% CI 1.7-4.8).

#### **Conclusion:**

PSA levels were not raised in the majority of respondents. PSA levels were associated with benign prostate enlargement, self reported erectile dysfunction, IIEF and SPSS scores. There was significant correlation with logistic regression for IIEF scores and self reported erectile dysfunction only.

## AB/17/167 (URO-04)

### **PHOTOSELECTIVE VAPORIZATION (PVP) VERSUS TRANSURETHRAL RESECTION OF THE PROSTATE (TURP): A PROSPECTIVE STUDY OF EARLY FUNCTIONAL OUTCOME AND IMPACT ON SEXUAL FUNCTION**

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#### **Purpose:**

To compare the early outcome including sexual function and postoperative morbidity of photoselective vaporization (PVP) and transurethral resection of the prostate (TURP) in patients suffering from low urinary tract symptoms (LUTS) due to benign prostatic hyperplasia (BPH).

#### **Materials and Methods:**

From Oct 2005 to Oct 2007, 53 patients received PVP (n=26) and TURP (n=27) in a prospective, non-randomized study. Primary outcome parameters included International Prostate Symptom Score (IPSS), peak urinary flow rate (Qmax), and International Index of Erectile Function Score (IIEF5) (IIEF5>11 included before operation). Secondary outcomes included intra-operative and post-operative surgical parameters and morbidity.

#### **Results:**

Baseline characteristics including age, PSA, prostate volume, IPSS, Qmax, and IIEF5 before operation were similar in both PVP and TURP groups. Operation time was no significant difference between two groups. Hospital stay was significant shorter in the PVP group (2.2±0.3 days vs 4.5±0.7 days; p=0.003). Catheter drainage was removed significant earlier after PVP than after TURP (1.2±0.3 days vs 3.3±0.7 days; p<0.001). Outcome of IPSS and Qmax were similar in both groups in 3 months. Mean IIEF5 score changed from 18.0±2.8 to 19.3±3.3 and 17.1±3.0 to 16.5±3.4 in PVP group and TURP group within 3 months, respectively (p>0.05). Retrograde ejaculation rate was 30.8% in PVP group and 76.9% in TURP group (p<0.05). Intra-operative and post-operative complications were comparable between two groups.

#### **Conclusion:**

Early outcomes 3-months after PVP and TURP are comparable. PVP offers advantageous over TURP with regard to sexual function and comfortable hospital stay.

## **AB/20/074 (URO-05)**

### **DNA DAMAGE SIGNALING IN RESPONSE TO OXIDATIVE STRESS IN PROSTATE CANCER CELLS**

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#### **Introduction:**

Oxidative stress can cause DNA damage and has carcinogenic potential. We analyzed the effects of H<sub>2</sub>O<sub>2</sub> on the apoptosis through DNA damage signaling and also PSA production in prostate cancer cells.

#### **Methods:**

We tested the expression level of PSA and the activation of DNA damage response proteins including ATM (ataxia-telangiectasia-mutated kinase), H2AX (histone H2AX variant) and Chk2 (checkpoint kinase2) in prostate cancer cell lines with various concentration of H<sub>2</sub>O<sub>2</sub>. Apoptosis is quantified by flow cytometry, caspase-3 cleavage and DNA laddering.

#### **Results:**

H<sub>2</sub>O<sub>2</sub> induces apoptosis and the phosphorylation of ATM, H2AX and Chk2 in LNCaP cells. ATM inhibitor can block the phosphorylation of H2AX and Chk2, but induced the activation of alternative pathways, p38 and ERK. PSA expression was increased by high concentration of H<sub>2</sub>O<sub>2</sub>, although androgen receptor expression is suppressed.

#### **Discussion:**

Oxidative DNA damage and its signaling pathway have important roles for the carcinogenic and aging process. Further mutagenic and pathogenically studies will be needed for such conclusions.

#### **Conclusion:**

Our results may indicate that oxidative stress can stimulate PSA expression and presumably modulate the prostate carcinogenesis through the activation of DNA damage response

**AB/22/077 (URO-06)**

**EFFECTS OF PDE5 INHIBITOR ON BLADDER BLOOD FLOW AND NITRIC OXIDE PATHWAY IN THE RAT URINARY BLADDER AFTER PARTIAL OUTLET OBSTRUCTION**

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**Introduction with Hypothesis:**

Recently, ischemia is believed to play a major role in bladder dysfunction. We investigated whether chronic administration of sildenafil as a phosphodiesterase type 5 (PDE5) inhibitor, increases the bladder blood flow and its mechanisms involving the nitric oxide (NO) pathway and reactive oxygen species (ROS) in the bladder dysfunction induced by partial outlet obstruction (BOO) in the rats.

**Methods:**

Two weeks after creating BOO rat model treated with vehicle or sildenafil (3, 10, 30mg/kg/day, orally for two weeks), we estimated bladder blood flow by using a fluorescent microsphere infusion technique, and tissue contents of NOx, cyclic GMP, endothelin-1 and malondialdehyde (MDA) as a ROS marker in the bladder. Also, bladder contractile response to electrical field stimulation in vitro was investigated.

**Results:**

In BOO rats, bladder blood flow, NOx, cyclic GMP contents and bladder contractile response significantly ( $p < 0.05$ ) reduced compared with sham group. On the other hand, endothelin-1 and MDA contents significantly ( $p < 0.05$ ) increased. Sildenafil treatment dose-dependently recovered bladder blood flow, NOx and cyclic GMP contents and bladder contractile response, while it significantly decreased endothelin-1 and MDA contents in BOO rats as compared with vehicle group.

**Discussion:**

BOO may induced bladder dysfunction caused by ischemia with accumulation of ROS and impairment of NO pathway. Chronic sildenafil treatment recovered the bladder dysfunction. This favorable finding seems to be caused by preservation of bladder blood flow with reduction of ROS and upregulation of NO pathway.

**Conclusion:**

Chronic sildenafil treatment may recover bladder dysfunction caused by BOO.

## **AB/25/016 (URO-07)**

### **LUTS WITH SYMPTOM OF URGENCY: AN OMINOUS SIGN FOR METABOLIC RISK FACTORS**

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#### **Introduction:**

Components of metabolic syndrome were reported to be associated with LUTS. Our previous study also found an association of LUTS and self-reported coronary heart disease. (Bali paper) Animal studies confirmed that hypercholesterolemia can result in thickening and fibrosis of prostate, changing its mechanical properties and impairing neurogenic relaxation in the prostatic tissue. Impaired neurogenic relaxation may contribute to symptoms of urgency. This study aimed to determine the association of metabolic risk factors in men and LUTS with urgency.

#### **Methods and Materials:**

This cross-sectional community-based study involving 1,665 urban-dwelling Malaysian men of age > 40 years were randomly selected from our electoral poll list. A clinical assessment of medical history, IPSS score, weight, height and waist circumference were done by trained general practitioners. Fasting blood samples were taken for assessment of glucose and lipid profile. Men with LUTS with urgency was defined as IPSS score of 8 and above together with urgency score of >1.

#### **Results:**

1046 men participated (response rate of 62%). Mean age was 55.8 years old (SD=8.4). Chinese formed the majority group (48.9%) followed by the Malays (34.6%) and the Indians (14.8%). Of 775 completed data, 14.2% of the men had LUTS with urgency. There were 21.0% of patients in LUTS with urgency group reported coronary heart disease versus 9% of patients who did not have LUTS with urgency ( $p < 0.001$ ); and 40.3% reported hypertension versus 28.3% respectively ( $p = 0.005$ ). Logistic regression analysis controlling for age, showed coronary heart disease was independently associated with LUTS with urgency.

#### **Conclusion:**

LUTS with urgency was significantly associated with hypertension and coronary heart disease and coronary heart disease was independently associated with LUTS with urgency.