ABSTRACTS BOOK

Abstracts of the Fourth Clinical Congress of the Gulf Chapter of the American Association of Clinical Endocrinologists; 3-5 November 2016; Dubai, UAE. II. Free Communications

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Published: 3rd November 2016
Ibnosina J Med BS 2016;8(6):298-331
Received: 09 October 2016
Accepted: 09 October 2016
This article is available from: http://www.ijmbs.org

Abstract
These are the advance abstracts of the free communications accepted for presentation at the fourth clinical congress of the Gulf Chapter of the American Association of Clinical Endocrinologists to be held on 3rd-5th of November 2016. One of the main objective of the congress is to give an opportunity to share results of clinical and basic research relating specifically to clinical practice of diabetes care and clinical endocrinology in the region.

We present the abstracts of the free communications as submitted by the authors after minimal restyling and editing to suit the publication requirements of the journal. Reflecting mostly the regional epidemiology and clinical practice in diabetes care and endocrinology, were selected for presentations as either oral or poster presentations. By publishing the proceedings of our fourth annual congress in this open access journal, we hope to extend the benefit to those who could not make it to the live presentations and give a safe home for all the abstracts for future reference. Thus making them permanently available to facilitate regional and international networking and collaboration between clinicians and academics of shared interests

Key words: Diabetes, Endocrinology, Metabolism, Clinical Care, Research, Epidemiology, Education.

Introduction
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I. Oral Presentations

OC1. Primary Hypothyroidism Presenting with Prolonged QT interval and Fatal Arrhythmia.

Salim M Al Ibrahimi, Israa Nihad Ahmedfareed. Al Manathira General Hospital, Al Manathira, Iraq

Background: We report the case of 60 years old female patient of hyapothyroidism presenting with ventricular arrhythemia and sudden cardiac death. Methods: In this case we present hypothyroidism presenting with ventricular fibrillation and shock state which is a rare presentation of hypothyroidism. Results: The patient presented with ventricular fibrillation and shock state and return the spontaneous circulation after DC shock with ECG of bradycardia, prolong QT interval, T-inversion and low lead voltage .On further work up the patient found to have undiagnosed hyothyroidism . Patient is started on thyroxin replacement therapy, the patient responded well intially and were discharged home. The patient now alive healthy at the time of report. Conclusions: In conclusion , a case is presented showing the prsentation of cardiac abnormalities in patient with overt hypothyroidism. Disappearance of these changes with thyroxine replacement is shown.

OC2. The Outcome of Well Differentiated Thyroid Cancer Management at SQUH Oman: Our 25 Years' Experience.

Samir Suliman Hussein Mohamed, Omayma Taha Elshafie, Nicholas Woodhouse. Sultan Qaboos University Hospital, Muscat, Oman

Background: Thyroid cancer it is the fifth commonest carcinoma overall in Oman and in women second only after breast cancer. The incidence of thyroid cancer is increasing in Oman from 43 in 1999 to 77 patients in 2011. The purpose of this study was to review the outcome of the management of the Well Differentiated Thyroid Cancer (WDTC) at SQUH in Oman Methods: We reviewed the medical records of 931 patients with thyroid cancer treated at SQUH from 1991 till 2012 and assessed the pathology, severity and outcome of the management according to 10 years objective response rate and 5 years survival rate. Results: Female to male ratio was 6:1, with mean age of 38 years (7-84). 67% of them had papillary, 16% follicular, 17% papillary variant follicular. 85% had stage I, 5% stage II, 1% stage III and 4% stage IV. 21% had neck lymph node metastasis, 11% extra thyroid extension and 23% multifocal and very few patients had bone, liver or brain metastasis. All the patient had near total thyroidectomy. 77% of them received one dose of radioactive iodine, 17% had 2 doses, 4% had 3 doses and 2% had more than 3 doses. The 10 years objective response rate, 91% had complete response, 7% partial response and 2% progression. The 5 year survival rate was 98%. Conclusions: In SQUH the 10 years objective response rate and 5 years survival rate in patients with WDTC are comparable to those of other centers worldwide.

OC3. A Child with Three Rare Presentations of a Common Disease, How Rare Is the Rare?

Manal Mustafa Khadora, Gururaj Aithalah, Mahmoud Elhalik. Latifa Hospital, Dubai, United Arab Emirates

Background: Hashimoto thyroiditis is one of the most common thyroid diseases in childhood. It may be associated with an euthyroid state, hypothyroidism or transient hyperthyroidism. It typically presents in female adolescents. This report aims to describe the occurrence of three rare presentations of Hashimoto thyroiditis in the same child and to evaluate its clinical course and response to thyroxine replacement. Methods: We report an eleven years old female, with long standing acquired primary hypothyroidism due to Hashimoto thyroiditis, who had in addition to the typical hypothyroidism symptoms three

rare presentations; Hashimoto encephalopathy, gonadotropin independent precocious puberty and pituitary macroadenoma. She was treated with thyroxine with significant clinical and biochemical improvement. Results: Our patient presented with typical symptoms of primary hypothyroidism; short stature, coarse facies, constipation, cold intolerance and bradycardia. She also had acute expressive aphasia, lethargy, unsteady gait, headache and signs of puberty. At presentation, her height 116 cm (-4.26 SD), weight 23.1 kg (-3.0 SD). Her serum TSH > 150 mIU/L (0.7- 4.6), FT4: 3.2 pmol/l (10.4-21.36), FT3 0.7 pmol/l (3.5-7.3), high anti thyroglobulin 494.5 IU/ml (negative < 100), anti peroxidase antibodies 1212 U/ml (negative <50U/ml), Creatinine phosphokinase 1378 U/L (0-150), high serum prolactine, suppressed LH, FSH, normal estradiol. She had delayed bone age of 8 years 10 months. Pituitary MRI revealed massive pituitary macroadenoma. She was started on Thyroxin only with reversal of the encephalopathic status, aphasia within one week and complete regression of pituitary macroadenoma within one year of treatment. Conclusions: Keeping high index of suspicion of Hashimoto thyroiditis with hypothyroidism is very important to avoid delayed diagnosis and serious complications. To the best of our knowledge, this is the first case report to describe the occurrence of three rare presentations in the same patient, and the first to describe the improvement of Hashimoto encephalopathy on Thyroxin replacement only.

OC4. Euthyroid Athyroxinaemia: A Novel Endocrine Syndrome.

Nicholas Woodhouse, Omayma Taha Elshafie. Sultan Qaboos University, Muscat, Oman.

Background: In the last eight years we have seen two Omani females from different tribes and an Indian male with undetectable free thyroxine (FT4) levels but with normal free triiodothyronine (FT3) and thyroid stimulating hormone (TSH) levels. All were clinically euthyroid. Methods: The most recent of these, a 50-year-old female with a large lobulated goiter, which had been present for 30 years, consented to an injection of recombinant human TSH (rh TSH) to assess her ability to synthesis FT4 and FT3. In addition she received a month's course of thyroxine (T4) 100 mcg daily, to determine whether or not there was any interference with our FT4 assay. Four years earlier at another hospital before surgery her thyroid function tests were the same as here with normal FT3 and TSH levels and an undetectable FT4. The technetium thyroid scan (Tc scan) revealed an uptake of 20%. Results: Following the injection of rhTSH there was a progressive increase of her FT3 levels from 5.8 (N 3.5-6.0) to 23 pmol/L at 24 hours, but the FT4 remained undetectable throughout. After taking T4 100 mg/day for one month her FT4 had risen to 15.0 pmol/L and the TSH was suppressed 0.09 mIU/L (n 0.34-5.6) confirming the absence of antibody interference with our FT4 assay. We also evaluated 3 of her 8 children aged 20, 26 and 34; one female and 2 males. The youngest male was quite normal but the 2 others had soft multinodular goiters and elevated Tc scan uptakes of 10.7 and 17 percent. All had normal FT3 and TSH levels but the FT4 was reduced at 7.2 pmol/ml (N 9-14.4) in the patient with the largest nodules on his thyroid ultrasound. Conclusions: We suspect that this is a previously unreported form of familial dyshormonogenesis which after several years patients lose their ability to synthesis FT4.

OC5. Resistance to Thyroid Hormone in a Jordanian Kindred Caused by a Missense Mutation in the Thyroid Hormone Receptor Beta.

Imad Brema[1], Ohoud Almohareb[1], Mussa Al Malki[1], Thomas Mueller[2]. [1]Obesity, Endocrine and Metabolism Center, King Fadad Medical City, Riyadh, Saudi Arabia, [2]Department of Pathology and laboratory Medicine, Molecular and Biochemical Section, All Children Hospital, St. Petersburg, USA

Background: Resistance to Thyroid Hormone (RTH) is a rare genetically inherited syndrome of reduced intracellular action of T3. RTH presentation is variable and in up to 15 % of patients there are no identifiable genetic mutations. Methods: The clinical, biochemical, radiological and genetic evaluation of a Jordanian kindred diagnosed with RTH will be discussed. Results: The proband is a 34 years old Jordanian male who complained of intermittent palpitations for 5 months. Thyroid function tests showed a discordant profile with high free T4 (FT4) 45.7 pmol/L (12-22), high free T3 (FT3) 11.8 pmol/L (3.1-6.8) and non-suppressed at TSH 3.19 mIU/L (0.27-4.2). Bisoprolol 2.5mg once daily was started by the family doctor and the patient was referred for further endocrine assessment. On examination, pulse was 72 bpm, regular, BP 120/82 mmHG, BMI 27.4 kg/m^2. There was no palpable goitre. Alpha subunit of TSH was 0.1

ng/ml (normal < 0.5), SHBG was 20.4 nmol/L (10-60). Pituitary MRI didn't show pituitary adenoma but showed an incidental finding of partially empty sella. RTH was suspected and genetic sequencing has confirmed a known, missense mutation in thyroid hormone receptor beta (THR-B) in the region of Exon 7, where a heterozygous A to G base change substitutes valine for methionine at codon 310. His 5 years old son also has high FT4 at 46.4 pmol/L (12-22), high FT3 16.5 pmol/L (2.8-7.1) and non-suppressed TSH of 4.3 mIU/L (0.85-6.5). He also had symptoms of hyperactivity, impulsivity, restlessness and aggressive behavior for the past two years. Genetic sequencing has also confirmed that this child has the exact mutation that his father had. Conclusions: We describe RTH due to a known mutation in THRB in a kindred with a rather variable presentation where the proband has mild tachycardia however, his son has extreme phenotype of hyperactivity, impulsivity and aggressive behavior.

OC6. Neonatal Outcome in Women with Gestational Diabetes on Different Pharmacological Modalities as Part of Service Review of a Joint Obstetric Diabetes Clinic for Multi-Ethnic Patients with Diabetes and Pregnancy in Qatar.

Khaled M O Dukhan[1], Sindu Christian[2], Hiba M H Satti[2], Mohamed H Daghash[3], Vincent Boama[4], Kamal Atta M Ahmed[2], Khaled A Ashawesh[1], Stephen F Beer[1], Hussam Afify B M Attia[2], Joohi Ramawat[2], Tarik A A Elhadd[1] · [1]National Diabetes Centre, Alwakra, Hamad Medical Corporation, Doha, Qatar, [2]Department of Obstetrics & Gynaecology, Alwakra Hospital, Doha, Qatar, [3]Department of Internal Medicine, Alwakra Hospital, Doha, Qatar, [4]Department of Obstetrics, Sidra Hospital, Doha, Qatar

Background: A joint obstetric Diabetes Clinic was established at Alwakra Hopsital in 2014. The catchment area is not limited to the geographical boundaries of the hospital so patients are representative of the multi-ethnic mosaic of the population in Qatar. Objective: Though many studies have looked at the neonatal outcomes in patients with gestational diabetes on different medication, there is no consensus on the preferred agent for therapy initiation. We aim to compare the neonatal outcome in our cohort to determine if any one modality was superior to the other. Methods: This study is a retrospective service evaluation from 1-07-2015 to 31-04-2016. The data of all gestational diabetic patients referred to the Joint Diabetic Clinic in a AlWakra Hospital who required pharmacological intervention were entered into an excel spreadsheet, including the antenatal, intrapartum and postnatal details taken from their Electronic Medical Record. Results: Total number of patients studied were 107 patients. Those on metformin were 58 patients (54.21%), the number of GDM women on Insulin alone were :. 17 patients (15.89%) and those on both insulin and metformin were 32 (29.90%). Average birth weight of the offspring in the three groups were 3287.78 gm, : 3409.24 gm and 3494.56 gm. respectively. The number of NICU Admission in these group were NICU Admission: 9 (15.51%). NICU Admission 5 (15.62%) and 2 (11.76%) respectively. Conclusions: 54% of our patients had controlled blood sugars with Metformin alone and these patients showed the least birth weight. Both the patient groups with insulin showed a higher foetal birth weight. The average NICU admission was least in the insulin only group, The increase in birth weight seen in patients on insulin may be related to direct effect of insulin therapy as been shown by previous studies or may be indicative of uncontrolled blood sugars in these patients which required initiation of insulin.

OC7. Disorders of Sex Development in Saudi Arabia.

Mashael Al Swailem, Ebtesam Qasem, Ohoud Alzahrani, Doha Alhomaidah, Afaf Alsagheir, Bassam Ben Abbas, Mai Almohanna, AK Murugan, Ali S. Alzahrani. King Faisal Specialist Hospital and Research Centre, Riyadh, Saudi Arabia

Background: Disorders of sex developments (DSD) are congenital/hereditary conditions in which development of chromosomal, gonadal, or anatomical sex is atypical. They represent a large group of disorders usually manifesting with ambiguous genitalia and unclear gender discovered at birth or later in childhood or adolescent life. The causes are variable and include gonadal dysgenesis/agenesis, chromosomal abnormalities, sex hormone biosynthesis defects or sex hormone receptor defects. Among the common causes of these disorders are congenital adrenal hyperplasia (CAH) and 5-alpha reductase deficiency. Other disorders include androgen receptor defects, Luteinizing hormone receptor defects, and congenital adrenal hypoplasia. Although DSD are generally very rare, they are fairly common in Saudi Arabia due to the high rate of consanguinity. There has been minimal to no data on the genetic basis of these

disorders. In this study, we characterized the genetic defects of a large series of patient with DSD. Methods: After obtaining an Institutional Review Board approval and informed consents, genomic DNA from peripheral blood leucocytes was isolated using the Gentra Blood Kit (Qiagen Crop, Valencia, CA, USA) according to the manufacturer's instructions. The eons and the exon-intron boundaries of the different genes were amplified by polymerase chain reaction (PCR) using newly designed or previously described primers and PCR conditions as appropriate for each exon. Successful amplification was confirmed on a 2% agarose gel. Each successfully amplified amplicons were directly sequenced in forward and reverse directions using a Big-Dye Terminator V3Æ1 Cycle Sequencing Kit (Applied Biosyjtem, Lincoln, CA, USA). The sequence was read against NCBI and Ensemble gene sequence databases. Potentially novel variants were confirmed to be novel by searching for them in at least 100 normal subjects and by their absence in the list of mutations in the Human Genome Mutation Databases. In silico analysis of PolyPhen2, SIFT and Mutation Taster. Results: The mutation found are summarized in table 1. In this series, 5α-reductase deficiency secondary to mutations in SRD5A2 was common (Table 1). However, all mutations found were known mutations but in contrast to previous reports, a splicing site mutation (IVS1-2 A>G) was the most common mutation suggesting that it might be a founder mutation. there was no clear genotype/phenotype correlation. Collectively, congenital adrenal hyperplasia secondary to deficiencies of any of the enzymes involved in glucocorticoid synthesis pathway (Figure 1) were also common. CYP11B1 showed a high rate of novel mutations (Table 1). A total of 37 patients with CAH were studied as follows: 4 with lipoid CAH (StAR), 9 with 3β-hydroxysteroid dehydrogenase type 2 (HSD3B2), 18 with 11β-hydroxylase (CYP11B1), 3 siblings with 17β-hydroxysteroid dehydrogenase type 3 (HSD17B3), and 3 with 17α-hydroxylase (CYP17A1). The results are summarized in table 1 and some examples are shown in figure 2. There was one family with a novel luteinizing hormone receptor splicing site mutation (LHCGR) (c.383+1 G>C) and one with congenital adrenal hypoplasia due to a novel mutation in NR0B1 (c.1412 A>T:p.X471L). Conclusions: This is the first and largest series of DSDs to be reported from Saudi Arabia with unique phenotype and genotype. several known and novel mutations were found at all levels of steroid hormone pathway including receptors of stimulatory hormones (LHCGR), transcription factors (NR0B1), glucocorticoid synthesis pathways (CAH), testosterone conversion pathway (SRD5A2) and androgen receptor (AR).

OC8. The Impact of Vitamin D Status on Cardiometabolic Complications Among Youth with Type 1 Diabetes Mellitus.

Adnan Al Shaikh, Abdullah Mohammad Alzahrani. King Saud bin AbdulAziz University for Health Sciences, Jeddah, Saudi Arabia

Background: There is an ongoing interest into the relationship between vitamin D status and diabetes control and complications. However data from Saudi Arabia (KSA) are limited. Objective: To determine the impact of vitamin D status on glycemic control and cardio-metabolic complications of children and adolescents with type 1 diabetes mellitus (T1DM) attending a tertiary care diabetes clinic in KSA. Methods: Demographic, clinical and laboratory data of children and adolescents with T1DM attending King Abdulaziz Medical City, Jeddah, during 2010 - 2013 were retrospectively collected. Vitamin D status was compared with the frequency of hypoglycemia, HbA1c, body mass index (BMI), blood pressure, and lipid profile. Results: 301 subjects (53.5% females), mean age was 13.9 ±3.8 years. The mean duration of diabetes was 7.7±3.7 years, BMI 21.1±4.5 kg/m2 and HbA1c was 9.6±1.9% in both genders. In all patients, only 26.2% had satisfactory HbA1c (≤8%). The mean level of 25 hydroxy vitamin D was 35.15±15.9 nmol/l and cholesterol was 4.75 ±1.1 mmol/l. Vitamin D deficiency (25 hydroxy vitamin D ≤ 37.5 nmol/L) was detected in 63.6% males and 67.7% females. In males, it was inversely associated with frequency of hypoglycemia ($p<0.01$), BMI ($p<0.05$), diastolic blood pressure ($p<0.05$) and triglycerides ($p<0.01$), while in females, it was inversely associated with current age ($p<0.05$), age at diagnosis ($p<0.01$) and triglycerides ($p<0.01$). No significant correlation between HbA1c and vitamin D deficiency was observed. Conclusions: Vitamin D deficiency is highly prevalent in our study and it is associated with frequent hypoglycemia and adverse cardio-metabolic control. A larger study is needed to confirm our findings.

OC9. Vitamin D Status in Infants During the First 9 Months of Age and its Effect on Growth and other

Biochemical Markers: A Prospective Cohort Study.

Manish Gutch[1], Uday Kumar Mandal[2], Sukriti Kumar[1] . [1]King George's Medical College, Lucknow, India, [2]LLRM Medical College, Meerut, India,

Background: We planned this prospective cohort study in term newborn babies, with the objective to determine the incidence of vitamin D deficiency in infancy and to determine the level of vitamin D which triggers the physiological PTH axis of the body so as to differentiate truly deficient from sufficient vitamin D status. Methods: Ninety six participants at birth were enrolled and followed up till 9 months of age. Serum 25OHD was estimated in cord blood at birth and at 14 ± 1 weeks of life. Seventy seven participants were followed up at 9 months for estimation of serum 25OHD, PTH, Alkaline phosphatase (ALP), calcium and phosphorus. Vitamin D deficiency was defined as serum 25OHD <15 ng/ml as per USIOM guidelines. Results: Serum 25OHD levels at 9 months of age (15.78±8.97ng/ml) were significantly increased in comparison to the level of 3 months of age (14.04±7.10ng/ml) and at birth (8.94±2.24ng/ml). At birth all the participants (77) were deficient in 25OHD levels. It was found that 16/94 (17%) and 19/77 (24.7%) participants at 3 and 9 months of age respectively became vitamin D sufficient without any vitamin D supplementation. There was a significant inverse correlation between serum 25OHD and PTH concentration (r=-0.522, p<0.001), serum 25OHD and ALP(r=-.501, p<0.001). It was found that reduction in serum vitamin D level to below 10.25 ng/ml results in surge of serum PTH. Conclusions: Vitamin D deficiency is common from birth to 9 months of age but incidence decreases spontaneously even without supplementation. Also large number of babies may be falsely labelled as vitamin D deficient with currently followed cutoffs. So a new cutoff for vitamin D deficiency needs to be established for neonates and infants.

OC10. Characteristics and Outcomes of Patients with Osteoporotic Hip Fracture: A Single Center Experience.

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Background: Hip fracture is the most severe and economically most important complication of osteoporosis in aged people. This study aimed to determine characteristics of patients with osteoporotic hip fracture at KAMC-Riyadh and assess if care delivered is in accordance with international standards. Methods: This is a retrospective cohort study done at KAMC-Riyadh involving patients above 40 years and admitted for hip fracture secondary to low-grade trauma last 2008-2012. Charts of eligible patients were collected and analyzed. Results: A total of 264 patients (133 males and 131 females) were included. The most common fracture types involved the trochanter (49.3%), followed by femur neck (46.2%). History of fall accounted for 115 (43.6%) of patients. Bone mineral density (BMD) was assessed in only 15.5% (N=41) of patients. Almost all patients underwent surgery (N=243, 92%). Surgical complications were noted in 15 (5.7%) patients and medical complications in 21 (7.9%) patients. Vitamin D and calcium were the most common medications given. Post-op follow up revealed that 62 patients (23.5%) patients died one year after surgery while 29 patients (11.1%) died within one year after surgery. Conclusions: The present study reveals that BMD testing is rarely documented or requested among adult patients diagnosed with hip fracture secondary to low-grade trauma in KAMC-Riyadh. Furthermore, mortality rate among these patients less than or one year post-operation is very high. Findings warrant urgent attention and reassessment of clinical care provided for these patients.

II. Poster Communications.

P1. Prevalence of Vitamin D Deficiency in Saudi Children and Adolescents.

Adnan Al Shaikh[1], Bahaa A. Abaalkhail[2], Ibrahim Kaddam[3], Ashraf Soliman[4], Khalid Aseri[3], Yousef Salih[5], Ali Al Qarni[6], Ahmed Al Shuaibi[7], Waleed Tamimi[8], Abdelmoniem Mukhtar[3]. [1]King Abdulaziz Medical City, King Saud bin Abdulaziz University for Health Sciences, [2]King Abdulaziz University, Jeddah, Saudi Arabia, [3]King Abdulaziz Medical City, Jeddah, Saudi Arabia, [4]University of Alexandria, Alexandria, Egypt, [5]College of Medicine, King Saud Bin Abdulaziz University for Health Sciences, Riyadh, Saudi Arabia, [6]King Abdulaziz University, [7]Al Imam Abdulrahman Bin Faisal Hospital, Ministry of National Guard

Health Affairs, Dammam, [8]College of Medicine, Saudi Arabia UHS, Riyadh, Saudi Arabia.

Background: Objective: Vitamin D deficiency (VDD) and insufficiency (VDI) are significant health problem all-over the world. The aim of this study was to determine the prevalence of VDD and VDI in children and adolescents residing in 8 provinces in the Kingdom of Saudi Arabia (KSA) and to investigate their calcium homeostasis. Methods: Methods: A cross-sectional study with 2110 participants aged between 6 and 15 years were enrolled. The questionnaire included personal and socio-demographic, anthropometric measurements, knowledge about vitamin D, color of the skin, dietary intake, sun exposure experience, smoking, and physical activity. The subjects were divided into three groups according to their blood level of vitamin D status (VDD≤25 nmol/L [25(OH) Vit D], VDI:25-50 nmol/L and VDS sufficiency >50 nmol/L). Results: VDD is highly prevalent in children and adolescents in Saudi Arabia. Percent of 95.3 of participants had either VDD (45.5%) or VDI (49.9%). The prevalence rate of VDD combined with VDI was higher in females (97.8%) compared to males (92.8%) P-value <0.001, and only 1.6 % had significant hypocalcaemia. Children and adolescents with dark skin had lower concentrations of Vit D and higher concentrations of PTH. A positive correlation was observed between 25 (OH) Vit D level and serum calcium, inorganic phosphate (PO4), and alkaline phosphatase (ALP) concentrations. Conclusions: Conclusions: We found high prevalence of VDD and VDI in children and adolescents with significantly higher prevalence in girls. These findings necessitate the set-up of a national program for vitamin D supplementation and health education for this vulnerable group.

P2. Molecular Genetics and Response to Intravenous Calcium Infusion of a Family with Vitamin D Resistant Rickets Type II.

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Background: Hereditary 1α,25 dihdroxy vitamin D resistant rickets (HVDRR) also known as Vitamin D dependent rickets type ǁ is a rare autosomal recessive disorder. This condition is associated with generalized Vitamin D resistance. The human VDR gene is located on chromosome 12q13.11 and is composed of 14 exons spanning~64 kb of DNA. Mutation in VDR gene can affect DNA binding domain (DBD) or ligand binding domain (LBD). Mutations in this gene are the underlying cause of HVDRR type II. High dose calcium therapy has shown clinical improvement and resolution of clinical and radiological rickets. This indicates that optimal calcium level can achieve normal bone mineralization independent of vitamin D receptor activity. Prolong intravenous, oral and enteral calcium therapy with good results is reported previously. Data on this condition from the Gulf region is scarce. In this report, we describe the clinical, molecular genetics and management of a family with severe HVDRR type II secondary to nonsense mutation in VDR. Methods: Three male siblings age 12, 7 and 1.5 years born to consanguineous parents with severe rickets and complete scalp and body alopecia. Diagnosis of VDRR was based on clinical and biochemical profile including low calcium and phosphate with elevated alkaline phosphate, parathyroid hormone and 1α,25 dihdroxy vitamin D. Genetic studies were done and revealed a non-sense mutation in the VDR gene (c.88C>T, p.R30X). First two siblings were treated with 3-7 days IV calcium infusion every month and oral calcium therapy (max. dose 4.5 g/day) since the age of 2 years. This treatment did not resolve rickets and biochemical picture remained unchanged with elevated alkaline phosphatase and parathyroid hormone. We treated older two siblings with 1.5g/m^2 and younger child with 750mg/m^2 daily calcium infusion for 4 weeks. They were discharged on oral high dose calcium therapy. Results: Biochemical profile improvement was seen. Clinically older siblings reported complete resolution of bone pain and increased mobility with minimal tiredness, these finding remained same after 1 month of oral calcium. Younger sibling 1.5 year old started weight bearing by the end of 4 weeks infusion. Radiological findings before and after calcium infusion are almost same. Conclusion: We described a family of 3 siblings with severe VDRR type II secondary to a severely truncating mutation in VDR. Short term daily calcium infusion for 4-6 weeks with improvement of bone markers (alkaline phosphatase and parathyroid hormone) can reduce the calcium demand of hungry bones. It can be followed with high dose calcium oral intake to maintain normal serum calcium.

P3. A Shift in Health Care Delivery Method: Shared Medical Appointment (SMA) For Patients with Type 2

Diabetes Mellitus.

Aisha Saif Al-Kubaisi, Silas Benjamin, Naseer Masoodi . Hamad Medical Corporation, Doha, Qatar

Background: Prevalence of DM in adult population of Qatar is 13%(1). DM is a chronic disease and self-management is a key factor for disease control. Various structured education programs have shown successful outcomes. Curriculum for education should be based on evidenced based solutions which are tailored to local cultural and individual needs. SMA helps high-need patients develop positive behavioral changes and lifelong skills in management of their chronic diseases. The objectives of this project were to set up SMA for adults with uncontrolled T2DM and provide structured education aiming to enhance self-management skills for dealing with DM and hence improving their health outcomes. Methods: A prospective cohort study was done at Hamad Medical Corporation (HMC), Internal Medicine Clinic (IMC), and run over a period of 6 months. It was structured by IMC SMA team with adoption of some elements from VA model of care. SMA was delivered by a multidisciplinary team, involving physicians, nurses and trained educators. The program was run once a month, face to face 2- hour interactive education session, followed by one to one private consultation. These were followed by phone calls in between. Inclusion criteria were adult patients with T2DM and HBA1C of 8% or more. Outcomes measured were gained self-management skills (include exercise regimen, blood sugar monitoring, dose adjustment) patient satisfaction, HBA1C, and management of comorbid conditions. Results: eligible patients were consented to participate in the SMA, 7 continued the SMA cycle. Average attendance rate was 80%. Baseline characteristics were: mean age was 31years (30-69years), mean duration of DM was 65 months (4-180 months), and mean HbA1C was 11.2 (5.1-20). All participants were overweight to obese with mean BMI of 31 (22-43). At the end of the SMA cycle the findings were significant for HbA1C improvement with mean of 8.3 (p 0.028). There was improvement in blood pressure (SBP 126 +/- 12.4 compared to 131 +/- 14.9, p 0.293). There was no significant change in BMI 31.3 +/- 6.8 (31 +/- 6.7 previsit, p 0.414). Reported behavioral and lifestyle change showed increasing the frequency of home blood sugar monitoring in 7/8 participants and increasing of the level of physical activity in >50% of participants. There was an improvement in depression score as well as higher patients' satisfactions was achieved. Conclusions: There are growing evidence supporting SMA model of care for chronic diseases. SMA for diabetes education was a new innovative model which was done for the first time at HMC. This study showed positive outcomes as evidenced by the improvement in patients' clinical profiles. These are small successes, yet help patients build their confident in managing their disease. SMA benefits both patients and providers. Peer support from other patients in the group, finding solutions, and tackling day to day challenges are unique elements in SMA that are not practical in traditional clinic setting. It also gave clinicians involved a common platform to discuss complex cases. Structured Diabetes education should be implemented at an early stage of diagnosis in order to maximize benefit.

P4. Vitamin B12 Levels in Omani Patients with Type 2 Diabetes Taking Metformin.

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Background: Metformin is a widely prescribed medicine to treat type 2 diabetes. Although metformin has an excellent safety profile, it can cause vitamin B12 deficiency. This study aimed at determining vitamin B12 levels in population with type 2 diabetes taking metformin. Additionally, the study looked at predictive factors for vitamin B12 deficiency including age, gender, HbA1c and Body Mass Index (BMI). Methods: Electronic files were reviewed for patients tested for vitamin B12 from March 2010 to September 2013 in Bousher polyclinic in Muscat, Oman. Demographic information, medications, and laboratory results were recorded. Patients above 40years with type 2 diabetes were included whereas, younger patients, individuals with type 1 diabetes mellitus, or history of vitamin B12 deficiency, B12 supplementation, Crohn's disease, prior bariatric surgery, or ileum resection were all excluded. Results: Out of 956 reviewed files, 398 patients were included (41.6%) of them, 72.1% were females. Diabetic patients were 143 (35.9%), of them 85(59.4%) were on metformin versus 58(40.6%) were not. Median vitamin B12 levels were significantly lower in metformin users 305 (IQR 220.5-406.5)Pmol/L vs patients who were not on metformin 368(IQR 282.5: 521)Pmol/L (P 0.006). Further analysis showed positive correlation of vitamin B12 levels with HbA1c (R=0.219, P 0.034) and negative correlation with BMI (R=0.214, P 0.044). No significant correlations were found with age or gender. Conclusions:

Levels of vitamin B12 were significantly lower in metformin treated patients with diabetes. This raises the question of whether to screen for vitamin B12 deficiency in metformin treated Omani patients with diabetes.

P5. Screening for Diabetic Retinopathy During Pregnancy Among Women with Type 1 and Type 2 Diabetes in Alwakra Hospital in Qatar.

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Background: Pregnancy may be associated with development as well as progression of diabetic retinopathy. The standards of care require referral of all pregnant women with both types of diabetes for retinal screening at least twice in the course of pregnancy. Objectives: As part of a service review for a newly established unit of Joint Obstetric Diabetes Clinic we aimed to examine our referral of such women to our local Ophthalmology unit at Alwakra Hospital in Qatar. Methods: We conducted a retrospective review over nine-month period (July 2015 to May 2016) study of the Joint Obstetric Diabetic Clinic patients in Al-Wakra Hospital, for diabetic retinopathy screening in pregnant women with Type I and Type II DM. 292 patients were reviewed. 46 women with pre-existing (Type 1 and Type 2) DM, who completed their ANC in JODC. Data has been retrieved from the electronic medical records (CERNER). Results: Out of the 46 patients; there were 5 (10.8%) patients with Type 1 diabetes, and 41 (89.2%) patients with type 2 diabetes. Of these; 39 patients were referred for retinopathy screening (67.3 % of all patients). Of those referred; 31 patients (79.4%) were seen and examined, and 8 patients (20.6%) did not show up for examination following their referral. Average time between referral and ophthalmology visit is 3.84 weeks. All patients who were screened had no evidence of diabetic retinopathy. Out of the 31 patient who screened, 13 patients (41.9%) did not attend for their second follow up screening

Conclusions: Significant number of patients were referred for retinopathy screening, were substantive (85%). Nevertheless, the reason why the 7 patients (15.3%) who have not been referred, showed should be figured out. The normal screening in our patient group may be a reflection of the short duration of diabetes in the screened patients and that the majority are of young age group. The number of patients who did not attend their Ophthalmology appointment, shows the lack of knowledge and awareness of the importance of the retinal screening during pregnancy. Proper connections between JODC team and ophthalmologists may be promoted. Awareness for both, patients and physicians , should be raised about the importance of retinopathy screening in pregnant women with pre-existing diabetes.

P6. The Prevalence of Peripheral Diabetic Neuropathy and Risk of Foot Ulceration in Qatar

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Background: Diabetic peripheral neuropathy (DPN) can lead to foot ulceration and amputation. There are no data on the prevalence of DPN and the risk of foot ulceration in Qatar. Aims: To define the prevalence of DPNand risk of foot ulceration in secondary care in Qatar. Methods: 434(230 males and 204 females) subjects attending the diabetes clinics in Hamad General Hospital and Alwakra Hospital underwent quantification of DPN using a Neurothesiometer Results: The average age, duration of diabetes, systolic BP, BMI and HbA1c were:53.2±13.5, 12±8.4years,137±3.3 mmHg, 32.3±1.1 kg/m2 and 8.3± 0.2%, respectively. The BMI of the South Asians (29.5 kg/m2) was lower than in Qatari's (33.3 kg/m2) and non-Qatari Arabs (38.1 kg/m2)(P=0.002). The prevalence of DPN (VPT>15V) was 36% and did not differ significantly between ethnicities.The prevalence of those at high risk of foot ulceration (VPT>25) was 15% in non-Qatari Arabs, 12% in Qatari's and 9% in South Asians. Conclusions: The prevalence of diabetic neuropathy was

comparable to other studies from Europe and the US. A high proportion of patients had unrecognised risk of foot ulceration, which was related to BMI.

P7. Loss of Consciousness and Headache in Type 1 Diabetes - Be Cautious

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Background: Patients with type 1 diabetes mellitus who seek tight glycaemic control are at significantly increased risk of developing hypoglycaemia. One major consequence of persistent and repeated hypoglycaemia is the development of hypoglycaemic unawareness which may manifest in many different way but can include unexplained headache and apparent sudden loss of consciousness. Medical practitioners are increasingly aware of the potential for hypoglycaemic unawareness but I present a case where thinking beyond conventional causes of loss of consciousness in a patient with type 1 diabetes mellitus led to an unexpected but highly rewarding outcome. Methods: A 36 year old female patient with type 1 diabetes mellitus of 17 years duration presented to the clinic. She reported recurrent episodes of occipital headache on rising from bed for 4 weeks and had noticed occasional episodes of hypoglycaemia at the same time as the headache - usually 2.3 - 3.5 mmol/l without evidence of adrenergic symptoms. She used a basal bolus regimen with insulin lispro and insulin glargine and had recently attained tight glycaemic control (HbA1c 6.1% on two occasions 12 weeks apart). She noted two episodes of loss of consciousness after rising from bed which were preceded by headache. Examination revealed a normal neurological examination. 12 lead ECG was normal. There was no injection site lipohypertrophy. Standard biochemical and haematology tests were normal, in particular there was a normal cortisol response to synacthen and coeliac screen was negative. A 72 hour continuous subcutaneous glucose monitor was employed which revealed 3 episodes of hypoglycaemia (<3.5 mmol/l) which were not associated with either headache or syncope. The patient was reviewed after 1 week and she described increasing intensity of her headaches which were now only relieved by assuming the recumbent position. A diagnostic test was performed. Results: MRI of the brain and whole spine was undertaken (Figure). The MRI revealed the presence of a mid thoracic spontaneous dural leak with associated bilateral subdural haematomas and downward displacement of the intracranial structures. The patient underwent an autologous lumbar epidural blood patch followed by 48 hours of strict recumbency. She was advised to moderately increase her caffeine intake. At review after 4 and 24 weeks she is completely free of symptoms of headache or syncope and glycaemic control remains good. Conclusions: Hypoglycaemic unawareness is an important feature of the pursuit of long-term tight glycaemic control in patients with diabetes mellitus. It is essential that any clinician seeing a patient with tight glycaemic control assess the patient to determine if they have features which might suggest the presence of hypoglycaemia with altered awareness and give advice both on it's management, and on the effect it. can have on driving and other important activities. Occasionally patients may present features that seem to be consistent with hypoglycaemia but investigations do not confirm this as the cause of the problem and review of the potential diagnosis is essential to ensure the best possible outcome for the patient

P8. Is there Any Difference in Occurrence of Hypogonadism in Men with or without Type 2 Diabetes Mellitus!

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Background: To investigate whether there is any difference in the prevalence and severity of low serum testosterone and its correlates in men with and without type 2 diabetes.

Methods: A cross-sectional study was conducted among total of 1717 men aged 30-70 years (1089 with type 2 diabetes and 628 non-diabetics) were included in this study.

Non-diabetic men were selected from accompaniers coming with their diabetic relatives or spouses to our diabetes and endocrine center clinics after confirmation of a normal fasting blood sugar in two consecutive days and normal HbA1c. For diabetics, a total 1089 consecutive diabetic men aged 30– 70 years were included in this study. Any subject with history of hypopituitarism, and chronic debilitating disease such as renal failure, liver cirrhosis, malignancy or receiving testosterone replacement therapy was excluded from the

study. Data related to the duration of diabetes, medications, and clinical history including the presence of neuropathy, retinopathy and coronary artery disease for patients with diabetes were abstracted from medical records. Study participants were asked to complete an Androgen Deficiency in Aging Male (ADAM) questionnaire. Fasting early morning venous blood samples were collected for measurement of total testosterone, sex hormone binding globulin (SHBG), follicular stimulating hormone (FSH), Luteinizing hormone (LH), prolactin (PRL), HbA1c, total cholesterol, high density lipoprotein (HDL) cholesterol, low density lipoprotein (LDL) cholesterol and triglycerides. Hypogonadism among both groups was defined as total testosterone < 3.0 ng/ml and calculated free testosterone <5ng/dl. Symptomatic androgen deficiency was defined as total testosterone < 3.0 ng/ml and calculated free testosterone < 5ng/dl in addition to a positive response to ADAM questionnaire. Results: The means of total testosterone level (SD) in diabetic and non- diabetic participants were 3.78 (1.7) ng/ml and 4.92 (2.5) ng/ml,respectively (P-value < 0.001); the prevalence of low Total Testosterone in diabetic and non- diabetic men was 39.1% and 17.2%, respectively, while the prevalence of low calculated Free Testosterone in diabetic and non-diabetic men was 27.9% and 11.6% respectively. The prevalence of hypogonadism (TT < 3 ng/ml and c FT < 5 ng/ dl) was 24.3% among diabetics and 8.3% among non-diabetics. The prevalence rate of hypogonadism (TT < 3 ng/ml and cFT < 5 ng/dl) for patients with type 2 diabetes mellitus. Conclusions: Hypogonadism is a prevalent disorder among diabetic population in comparison to non-diabetics. Symptoms of androgen deficiency should be corroborated with a low serum testosterone to establish a multidisciplinary approach for management of hypogonadism.

P9. Can We Predict HbA1c Control in Type 2 Diabetic Patients Without Performing this Test? A Study in Tertiary Care Center in Lahore

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Background: HbA1C is the most useful diagnostic tool to assess the control of Diabetes. However, the predictors of good and bad control are not well established in our population. We carried out this study to 1) assess the level of A1C control among type 2 diabetic patients and 2) Find out factors which can predict uncontrolled A1C. Methods: Retrospective observational study was carried out in patients attending outpatient of Diabetes Endocrine and Metabolic Centre (DEMC) of Lahore General Hospital from June 2012 to Feb 2014. 809 patients were randomly selected with A1C levels. We also assessed factors associated with it. Chart review of the included patients was done using a data collection sheet. Patient demographic data was gathered. Information on complications and laboratory results (HbA1C, Triglycerides (TG), Dyslipidemias) was collected. Complication data was obtained both clinically and laboratory workup. Patients with A1C<7% were considered well controlled. Results: Of enrolled patients, 32.9% attained A1C control. Analyses revealed some factors more significantly associated with uncontrolled A1C. Among them were neuropathy, longer duration of diabetes and Dyslipidemias. When multivariate analysis was carried out, chances of having uncontrolled A1C were significantly higher among patients who developed neuropathy and longer duration of diabetes, while triglycerides and other dyslipidemias were not statistically significant. Conclusions: The level of HbA1C was uncontrolled in our population. Uncontrolled HbA1C was more likely to exist in patients with neuropathy and longer duration of Diabetes. High triglycerides and other dyslipidemia were also present with it, but not statistically significant.

P10. The Risk of Type 2 Diabetes Development in Women with Gestation Diabetes: A Meta-Analysis to Quantify the Risk Level.

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Background: Gestational diabetes mellitus (GDM), defined as glucose intolerance that is first diagnosed in pregnancy, is on the increase worldwide. Approximately 50% of all women who develop gestational diabetes mellitus go on to develop type 2 diabetes, especially in the first five years after pregnancy. Despite this awareness, individual risk estimations are not available. We conducted a meta-analysis to assess the risk of progressing towards type 2 diabetes in women who have

gestational diabetes mellitus. Methods: Databases such as Medline and Embase were mined for studies that assessed the risk factors in women with GDM and progression to type 2 diabetes. Keywords such as 'diabetes, gestational', 'GDM', and 'pregnancy induced diabetes', and combined these with terms for type 2 diabetes such as 'diabetes mellitus, type 2' were used. For various risk factors, we calculated the RRs for dichotomous variables, and plotted point estimates and 95% CIs for progression to type 2 diabetes for women with GDM associated with various risk factors. Results: From 3,966 citations, 188 studies were investigated further. 140 studies were excluded for various reasons and finally 30 studies that assessed 85, 780 women were selected. Our meta-analysis included a large number of studies, and we were able to study most of the potentially relevant risk factors. We identified precise estimates for individual risk factors that are relevant for providing postnatal information to women with GDM. Conclusions: Pregnancy is an important point in the life of a woman when she has regular contact with the healthcare industry and this provides a unique opportunity to have influence on her heatlh and her health of her child. Postnatal counselling of women with GDM should be individualised for the risk of future diabetes.

P11. Prognostic Factors in Patients Hospitalized with Diabetic Ketoacidosis.

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Background: Diabetic ketoacidosis is characterized by biochemical tired of hyperglycemia, acidosis, and ketonemia. It remains a life threatening condition despite improvement in diabetic care, timely identification and intervention remains the backbone of treatment. Objectives: To 1) evaluate the clinical and biochemical prognostic markers in diabetic ketoacidosis and 2) correlate the various prognostic markers with mortality in diabetic ketoacidosis. Methods: A prospective multicenteric observational study done at tertiary care center. Eighty seven patients of type 1 diabetes hospitalized with diabetic ketoacidosis over a period of 1 year were evaluated clinically and by laboratory tests. Serial assays of serum electrolytes, glucose and blood pH, and clinical outcome of either discharge home or death were evaluated. Results: The significant predicators of final outcome obtained were further regressed together and subjected with multivariate logistic regression (MLR) analysis. The MLR analysis further revealed that the male sex had 7.93 fold higher favorable outcome as compared to female sex (OR=7.93, 95% CI=3.99-13.51) while decrease in mean APACHE II score (14.83) and S. PO3-- (4.38) at presentation may lead 2.86 (OR=2.86, 95% CI=1.72-7.03) and 2.71 (OR=2.71, 95% CI=1.51-6.99) fold better favourable outcome respectively as compared to higher levels (APACHE II score: 25.00; S. PO3--: 6.04). Conclusions: Sex, baseline biochemical parameters like APACHE II Score, and phosphate level, were important predicator of mortality from DKA.

P12. What Can Quality Add to Diabetes Care?

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Background: The concepts of quality extended to expand over all medical specialties putting the goal of patient's safety as the first goal in practice. Diabetes is one of the commonest chronic diseases worldwide as well as among the top diseases consume the health budgets worldwide. The care is the last product of complex process including resources, systems and beneficiaries such as patients. Reactive actions to any defects affected this process was one of the temporary solutions but proactive and continues assessment to this process is the permanent solution. The growing up of the prevalence of diabetes should be ground for the question; why the figures do not go down although huge budgets were directed to decrease these figures? Discussion: The answer was on the lack of investment on the components of the diabetes care process and ignore implementation of quality improvement principles before initiation the care services. Proper diabetes care needs standards for care included systems run the care and measurements assess the service in continuous way.

P13. Prevalence of Hypogonadism and Erectile Dysfunction Among Type 2 Diabetic Patients in Dubai.

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Background: Diabetes has recently drawn a substantial attention in the United Arab Emirates as 19% of its populations are living with diabetes, which ranked UAE 16th worldwide. Diabetes is considered a main health concern worldwide has a multiple impacts on patient's

health status and morbidity. Consensus recommendations issued by a number of international societies recognized type 2 Diabetes Mellitus as a risk factor for male hypogonadism. This study aims to detect the prevalence of hypogonadism among UAE national patients in Dubai clinics. Methods: A cross sectional design study of 137 Emirati diabetic male patients in the year 2015. This study was conducted over the period of 1 year which included local male patients aged from 30 to 70 who were diagnosed to have diabetes mellitus type two. The study excluded any patient on hormonal replacement therapy and other comorbidities such as advanced chronic kidney disease, cancer, heart failure, pituitary disease, or adrenal disease. The sample of subjects were recruited using simple randomized method. Subjects were inquired to answer the Androgen Deficiency for aging male (ADAM) questionnaire. Then followed by laboratory investigations used to correlate testosterone levels and detect hypogonadism. Hypogonadism is defined to be low if below 8 mmol/dl, intermediate if from 8 to 12 mmol/dl, and normal if above 12. Patients with intermediate levels are considered clinically hypogonadal if symptoms of positive ADAM score was correlated. Results: From the 137 subject, 107 (78.8%) scored positive in ADAM score. Out of the 111 subjects whom had their testosterone level checked, 9 patients had low testosterone (<8 mmol/dl), 27 subjects had intermediate level (8mmol/dl – 12 mmol/dl) and 75 subjects are within the normal range (>12mmol/dl). Therefor, 27% of the subjects who had done their testosterone levels, had clinical hypogonadism. 108 subjects answered the erectile dysfunction question from the ADAM questionnaire. 78 subjects answered yes for the question, out of which 27 has low testosterone, indicating 25% of the subjects with erectile dysfunction has hypogonadism. Conclusions: In conclusion, Hypogonadism should be addressed as it is considered to be a substantial public health burden in Emirati people with diabetes. 1 out of 3 persons with diabetes with positive ADAM scoring are having hypogonadism. We recommend to screen all diabetic men using the ADAM questionnaire for Hypogonadism.
Therefore facilitate a new strategy to establish better wellbeing of the Emirati national diabetic men.

P14. Health Information Needs of Women at a Tertiary Care Hospital in the United Arab Emirates

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Background: Self-management is essential in the treatment of diabetes. The aim of the study was to assess diabetes self-management and need for medical information among Emirati women. Methods: One hundred diabetic Emirati women were randomly selected from Tawam hospital's diabetes outpatient clinic between Mai and November 2015. The participants were personally interviewed using a structured questionnaire that assessed their knowledge about diabetes, their daily self-management and subjective need for medical information about the disease. The study was approved by Al-Ain medical district human research ethics committee. Results: The participants' mean age was 56 years. Illiteracy rate was 48%. Thirty-two percent reported their general health as poor. Physical inactivity was reported by 49%. The mean HbA1c and BMI among the participants was 7.9 and 33.6 respectively. Sixty percent used oral hypoglycemic drugs, 27% used both oral and injectable hypoglycemic drugs, 10% used injectable hypoglycemic drugs and 3% reported lifestyle intervention. Cardiovascular comorbidity was reported by 82%. Nine out of ten said they fasted during Ramadan and altered their drug use during that month. In addition, 36% said they fasted Mondays and Thursdays regularly.One-third said they needed assistance to measure their blood sugar level at home. Of the participants, 55% said they needed assistance to understand written medical information. Oral medical information in the form of one-to-one meetings was preferred by the women. In all, 43% of the women reported their need for more specific medical information about diabetes treatment management when they fast. However, eight out of ten said they got information, primarily about developing a healthy lifestyle. Conclusions: Illiteracy, physical inactivity and religious factors seem to influence diabetes self-management of Emirati women in UAE. Patient centered and empowerment programs are essential to improve self-management among the diabetic women. The majority of the participants prefer medical information to be in oral one-to-one meetings form.

P15. Managing Hypoglycemia During Fasting in Ramadan- Scoping Review of the Evidence Based Perspectives in Type 1 Diabetics (MYRIAD)

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Background: People with Type 1 Diabetes Mellitus (T1DM) are generally advised not to fast because of the risks of severe complications, especially hypoglycemia; with enhanced risk for augmented ketogenesis. The novel approaches have been documented to help mitigate the clinical risks of hypoglycemia especially during fasting. Methods: We conducted a step wise literature mapping and a scoping review for the evidence based perspectives for identifying the research question and the relevant studies, across the pubmed and Cochrane library by using specific MeSH, boolean operators Type 1 diabetes AND Ramadan AND Hypoglycemia AND challenges NOT type 2 Diabetes. We undertook interpretive synthesis to identify evolution of approaches that can enable people with T1DM to fast during Ramadan Results: T1DM fasting increases the risk of hypoglycaemia by 4.7 fold during Ramadan as compared before Ramadan (EPIDIAR). We evaluated a total of four studies across 2005-2016 which evaluated the hypoglycemia risk mitigation modalities. The cumulative no. of patients analysed were 103 (mean 25.75 ±23.82, min 5, max 60 CI -12.16, 63.66). Two studies each were published from Lebanon and one each from UAE and the recent most (2016) from Egpyt, evaluated the benefits of the low glucose suspend feature of the Medtronic sensor-augmented insulin pump system (MiniMed 530G with Enlite). The modalities to mitigate the risk of hypoglycaemia include, insulin pumps, self-monitoring with regular follow up through a comprehensive care team approach model and modulation of the insulin type and dosage during Suhur and Iftar. Conclusions: The recent evidences demonstrate that an individualised management plan under medical supervision with multi pronged approach can enable people with T1DM to fast safely. We propose a new comprehensive care model (ICT) encompassing judicious approach of Insulin pump, Comprehensive care, Therapeutic modulation as a new paradigm to mitigate the risks of hypoglycemia in T1DM

P16. Situation Analysis of Diabetic Patients at Primary Health Care Center in Al-Ahsa, Saudi Arabia

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Background: The prevalence of diabetes for all age groups worldwide was estimated to be 2.8% in 2000 and 4.4% in 2030. The total number of people with diabetes is projected to rise from 171 million in 2000 to 366 million in 2030. The problem is that it has many complications that affect multiple systems. The complications can be prevented by strictly control of sugar level. Methods: It was a cross-sectional study conducted during a mentorship in April to June 2013. We started our study by defining our objectives and development of protocol. After initial approval of our research question, we started to develop a spreadsheet for collection of information from files available at primary health care center. During our study we included 104 files in total. Out of these, 65.4% were belonging to males while 34.6 % files related to females. We fed data into SPSS version 17 and apply chi-square test for assessing significant difference at the level of 0.05. Results: This data have showed that the mean of age of patients is: 58.521 (SD ± 13.837) and the mean of their BMI is: 30.732 (SD ± 7.614).Uncontrolled diabetes means that the HbA1c is greater than 7% most of times and this can damage the heart, kidneys and nervous system .This study showed that most of the patients have high HbA1C value, High LDL- HDL ratio, and some of them have complications like retinopathy. Conclusions: The results depicted that the sample population have high rate of uncontrolled diabetes mellitus. Therefore, it is recommended that the family physicians and the patients to be aware about the diabetes and its severe complications.

P17. Effect of Metformin on TSH

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Background: Metformin remains a time tested drug and stands as a drug of first choice in majority of the patients with type 2 DM. One of the latest domains of function

added to metformin is on thyroid functions especially TSH.In this study we tried to see the effect of metformin on thyroid functions in patients of type 2 diabetes mellitus and PCOS who had never received this drug before. Methods: This study was conducted in the Department of Endocrinology at Sher-i-Kashmir Institute of Medical Sciences (SKIMS), Srinagar. Study was approved by the Institute Ethical Committee. Recruitment of the study subjects was done from the Department of Endocrinology SKIMS from February 2013 to march 2014. Patients with overt hyperthyroidism or hypothyroidism were excluded from study and so were the patients who had taken metformin earlier for one reason or the other.All the patients were put on metformin with a dose of 1gm once daily in type 2 diabetes mellitus and 500 mg once daily in PCOS patients. we measured total T3, total T4, free T3, free T4, TSH, anti-TPO, serum insulin, blood sugar fasting levels at baseline and after 6 months of treatment with metformin. Results: We did not find any difference in the thyroidal effect of metformin on the basis of gender, BMI, age, diagnosis. But we did find that TSH was significantly decreased in those subjects in whom HOMA IR decreased as compared to those where it increased. Conclusions: In conclusion, we observed a positive correlation between serum thyrotropin levels and indices of insulin resistance. There is a decrease of thyrotropin (TSH) levels with metformin treatment at 6-months follow up that is statistically significant only in subjects in whom HOMA-IR also decreases. We also found that total T4 levels were decreased significantly after treatment with metformin, but this effect was not dependent on change in HOMA-IR, and needs to be studied further. How exactly the changes in HOMA-IR bring about changes in TSH levels remains a topic of interest for further research.

P18. Improved Glycemic Control and Weight Loss with Once-Weekly Dulaglutide Versus Placebo, Both Added to Titrated Daily Insulin Glargine, in Type 2 Diabetes Patients (AWARD-9).

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Background: This double-blind, 28-week study compared once-weekly glucagon-like peptide-1 receptor agonist dulaglutide (DU) 1.5 mg and placebo when added to titrated once-daily insulin glargine (±metformin) in patients with type 2 diabetes with inadequate glycemic control (glycated hemoglobin [HbA1c] ≥7% and ≤10.5%). Methods: Patients (N=300; mean baseline characteristics: age, 60.4 years; HbA1c, 8.4%; body mass index, 32.7 kg/m2; glargine dose, 39 U [0.42 U/kg]) were randomized (1:1) to DU 1.5 mg or placebo; glargine was titrated to fasting plasma glucose target (71 to 99 mg/dL). The primary objective was HbA1c change from baseline at Week 28 tested for superiority. Results: At Week 28 (Table), DU 1.5 mg resulted in significantly greater reductions than placebo in HbA1c and fasting serum glucose (both p<.001). Body weight decreased with DU 1.5 mg and increased with placebo (p<.001); hypoglycemia rate (≤70 mg/dL and/or symptoms) was 7.69 and 8.56 events/patient/year for DU 1.5 mg and placebo, respectively (p=.488); and numbers of severe hypoglycemia events were 1 (DU 1.5 mg) and 0 (placebo). A statistically greater increase (p<.001) in glargine dose was observed with placebo compared to DU 1.5 mg. Nausea and diarrhea were more common with DU 1.5 mg (12.0%, 11.3%) versus placebo (1.3%, 4.0%), respectively. Conclusions: Once-weekly DU 1.5 mg compared to placebo, both add-on to titrated daily glargine, resulted in better glycemic control and weight loss without significantly increasing the risk of hypoglycemia.

Disclosures: This study was supported and conducted by Eli Lilly and Company, Indianapolis, IN, USA. This is an encore of an abstract that was presented at the American Diabetes Association – 76th Annual Scientific Sessions; June 10 – 14, 2016; New Orleans, LA, USA.

P19. Assessment of Clinical and Biochemical Hypogonadism in Men with Type 2 Diabetes: A Cross Sectional Study from Saudi Arabia

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Background: Worldwide a high prevalence of hypogonadism (androgen deficiency) in men with type 2 diabetes mellitus (T2DM) has been reported. The objective of this present study was to determine the clinical and biochemical hypogonadism in men with T2DM in Saudi Arabia. Methods: A cross-sectional study was conducted among 157 men (aged 30-70 years) with T2DM. Patients' demographic characteristics, duration of diabetes, lipid profile, smoking habits, presence of retinopathy, neuropathy, and nephropathy, total testosterone (TT), follicle-stimulating hormone (FSH), sex hormone binding globulin (SHBG), luteinizing hormone (LH), prolactin (PRL), serum lipids, creatinine and glycosylated hemoglobin (HbA1c) were collected using a pre structured questionnaire. Biochemical hypogonadism was defined as a serum TT level below 8 nmol/L. All patients were asked to complete the Androgen Deficiency in Ageing Male (ADAM) questionnaire. The results are presented as mean ± standard deviation. Results: A total of 121 (77.1%) patients were found to have hypogonadism. Among the patients studied, 21.6% (n=34) had biochemical hypogonadism. The demographic and clinical parameters of the patients with hypogonodisim were as follows: age 54.3±10, duration of DM 9.6±7.7, BMI 30.4±5.1, HbA1c 9.68±7.7, total cholesterol 4±1.18, triglycerides 2.5±9.7, low-density lipoprotein 2.3±0.96, high-density lipoprotein 1.10±0.26, LH 7±5.15, FSH 8.23±9.2, prolactin 208±45, total testosterone 14.7±6.7, calculated bioavailable testosterone 15.3±8.8, creatinine 95±32.1 and calculated free testosterone level 1.05±0.6. Univariate analysis showed a significant relationship between age, duration of diabetes and HbA1c. Regression analysis indicated that age and HbA1c as the independent risk factors of hypogonadism. Conclusions: Testosterone levels are frequently low in men with T2DM. Further, age and HbA1c were found to be the independent risk factors for hypogonadism.

P20. The Prevalence and Risk Factors for Painful Diabetic Neuropathy in Qatar

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Background: There are no data on the prevalence of painful diabetic neuropathy (PDN) in Qatar.
We aimed to define the prevalence and risk factors of Painful Diabetic Neuropathy in a secondary care diabetes clinic in Qatar. Methods: Methods:295 subjects attending the diabetes clinics in Alwakra Hospital underwent assessment with the DN4 questionnaire. Results: The average age, duration of diabetes, systolic BP, BMI, HbA1c were:50.9 ± 0.71, 8.3 ± 0.43 years, 131 ± 1.42 mmHg, 32.2 ± 0.63 kg/m2 and 8.4 ± 0.14 %, respectively. The prevalence of PDN was 22% (n=66) but only 9% had been previously diagnosed and only 3.4% were receiving treatment for PDN. DPN prevalence was highest in Qataris (33%) followed by other Arabs (25%, p=0.36) and Asians (14%, p=0.005). Patients with PDN were significantly older (55.03 ± 1.33 v 49.6 ± 0.76, p<0.001), had a longer duration of diabetes (13.32 ± 1.19 v 6.8 ± 0.39, p<0.0001), higher systolic blood pressure (135.4± 2.43 v 128.4 ± 1.7, p=0.02), higher creatinine (116.9± 16.73 v 70.7 ± 2.01, p<0.01) and a higher vibration perception threshold (19.1± 1.46 v 8.9 ± 0.49, p<0.0001), but no difference in HbA1c (8.65 ± 0.26 v 8.22 ± 0.17), vitamin D (22 ± 1.65 v 22.5 ± 1.45) or B12 (345.9 ± 47.12 v 289.2 ± 40.35). Patients who exercised 3 days or more per week were at lower risk for PDN (OR=2.66, 95% CI 1.18-6, p=0.03). Conclusions: The overall prevalence of PDN is comparable to that reported in Europe and the US, but is higher in Qatari's and other Arabs than in Asians in Qatar. An alarmingly low proportion of patients are diagnosed and treated for DPN in Qatar. Age and duration of diabetes, but not glycaemic control, vitamin D or B12 levels relate to PDN. Regular exercise may be important in reducing the risk of PDN.

P21. Effect of Empagliflozin on Heart Failure Outcomes in Subgroups by Age: Results from EMPA-REG Outcome

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Background: In the EMPA-REG OUTCOME trial, empagliflozin (EMPA) added to standard of care significantly reduced 3-point major adverse cardiovascular (CV) events, CV death, hospitalization for heart failure, and heart failure hospitalization or CV death (composite) in patients with type 2 diabetes(T2DM) and high CV risk. We investigated the effect of age on reduction in hospitalization for heart failure and heart failure hospitalization or CV death with EMPA. Methods: Patients in EMPA-REG OUTCOME were randomized to receive EMPA 10 mg, EMPA 25 mg or placebo (PBO). We analyzed hospitalization for heart failure and heart failure hospitalization or CV death in the pooled EMPA group versus PBO in subgroups by baseline age (<65, 65 to <75, ≥75 years). Results: A total of 7020 patients were treated. Median observation time was 3.1 years. Mean (SD) age at baseline was 63.2 (8.8) years in the PBO group and 63.1 (8.6) years in the EMPA group. Reductions in hospitalization for heart failure and the composite of heart failure hospitalization or CV death with EMPA vs PBO were consistent across age categories (Figure). Across age subgroups, reported adverse events were consistent with the known safety profile of EMPA. Conclusions: EMPA, added to standard of care, reduced the risk of hospitalization for heart failure and heart failure hospitalization or CV death in patients with T2DM and high CV risk irrespective of age

P22. Effect of Empagliflozin on Nephropathy in Subgroups by Age: Results from EMPA-REG Outcome

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Background: In the EMPA-REG OUTCOME trial, empagliflozin (EMPA) given in addition to standard of care significantly reduced the risk of new or worsening nephropathy versus placebo (PBO) in patients with type 2 diabetes (T2DM) and high CV risk. We investigated the effect of age on the reduction in new or worsening nephropathy with EMPA. Methods: Patients in EMPA-REG OUTCOME were randomized to receive EMPA 10 mg, EMPA 25 mg, or PBO. New or worsening nephropathy (defined as new onset of macroalbuminuria, doubling of serum creatinine, initiation of renal replacement therapy, or death due to renal disease) was analyzed in the pooled EMPA group vs PBO in subgroups by baseline age (<65, 65 to <75, ≥75 years). Results: A total of 7020 patients were treated. Median observation time was 3.1 years. At baseline, mean (SD) age was 63.1 (8.6) years and 63.2 (8.8) years in the EMPA and PBO groups, respectively, and mean (SD) HbA1c was 8.07 (0.85) % and 8.08 (0.84) % in the EMPA and PBO groups, respectively. The benefit of EMPA vs PBO on new or worsening nephropathy was consistent across age categories (Figure). Across age subgroups, reported adverse events were consistent with the known safety profile of EMPA. Conclusions: EMPA, in addition to standard of care, reduced the risk of new or worsening nephropathy in patients with T2DM and high CV risk irrespective of age

P23. Type 2 Diabetes Among Emirati Adolescents: Underdiagnosed and Undertreatment?

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Background: The United Arab Emirates (UAE) has one of the highest prevalence type 2 diabetes mellitus (T2DM) in the world among its adults; however, similar data for adolescents is unavailable. This study aimed to estimate the prevalence of T2DM and its diagnosis and management status among adolescents aged 12 to 18 years. Methods: A random sample of 1186 adolescents, aged 12 to 18 years old was selected from 114 public and private schools in Al Ain, UAE. Prediabetes, T2DM & T1DM were diagnosed by a) by laboratory findings according to American Diabetes Association guidelines: fasting plasma glucose (FPG) ≥126 mg/dl (7.0 mmol/l) and 100-125 mg/dl (5.6-6.9 mmol/l), respectively and/or b) or clinically by history of insulin or oral hypoglycemic drug use. Results: Overall, the prevalence (per 1000 subjects) of prediabetes, T2DM and T1DM were 85.30 per 1000 (95% CI, 67.98-98.9), 8.44 per 1000 (95% CI, 3.91-14.02), and 1.69 (95% CI, 0.15-4.47), respectively.

In our study significant proportion (60%) of adolescents were undiagnosed, defined as not having self-reported type 2 diabetes but having fasting blood glucose measures that met ADA guidelines (FPG level ≥126 mg/dl or 7.0 mmol/l). Off the 10 with diabetes, 4 (40.0%) were aware of their diabetes and were using oral hypoglycemic tablets. Conclusions: The prevalence of prediabetes and T2DM is excessive among adolescents of the UAE. A high proportion of adolescents with T2DM were undiagnosed and under treatment.

P24. Management of Diabetic Ketoacidosis After introduction of Local Hospital Protocol in a Secondary Care Hospital –An Audit Report

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Background: The aim was to conduct a clinical audit of the management of Diabetic Keto Acidosis (DKA) based on hospital protocol in the selected secondary hospital Methods: Retrospective research design using electronic patient records were used in the study across 5 years (2010-2014) after fulfilling the research questionnaire. The audit includes 83 inpatients notes from 49 patients with DKA who fit the sampling criteria after getting ethical approval Results: Majority of the patients was young adults (13-30 years) and poor compliance to medications was a common precipitating cause of DKA. Median hospital stay was 3 days. Intravenous 0.9% sodium chloride was initiated in the early first hour of diagnosis of DKA in all patients. Readmission rate was 25 percent. Potassium was administered early only for 9 patients Insulin commenced less than 1 hour for two-third of the patients, Blood glucose was checked for all patients hourly. Bicarbonate and potassium was not checked in majority of patients as required. Intravenous dextrose was given to all patients. One third of the patients developed mild iatrogenic hypoglycemia and hypokalemia. There were no major complications or death. Full protocol was followed only for 5 patients (10 percent) and there was no hypoglycemia and median hospital stay was reduced to 2 days. Conclusions: The study showed there was no major complications and mortality. Poor adherence to the protocol in some areas like sampling and replacement of potassium in early hours were observed. Continued medical and Para medical training in dedicated areas is needed to reduce these complications there by reducing length of hospital stay. Repeated health education and multidisciplinary team involvement will reduce readmission rates. The team will be auditing again in 2 years after implementing these changes.

P25. Is Glycemic Control Predicting One Year Change in Low Density Lipoprotein Levels in Young Adult with Type 1 Diabetes Mellitus?

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Background: To test if the change in glycated hemoglobin (HbA1c) over a follow-up interval of approximately one year would be associated with concomitant changes in Low Density Lipoprotein Levels cholesterol (LDL.c) in young adult with type 1 diabetes (T1D). Also to determine T1DM patients who would be eligible for lipid-lowering medications based on American Diabetes Association (ADA) guidelines. Methods: our retrospective comparative study included 81 patients with T1D who attended and follow in Diabetes out patient's clinics of Kuwait primary health care centers during the period of 2013-2014; for them, recorded data for age, sex, duration of diabetes, Body mass Index (BMI), HbA1c and LDL.c at the beginning and at the end of one year duration were included in this study. Results: We are reporting data on a population of n=81 subjects with T1DM with a mean age (19.38 ±6.332 years).Female and male distribution was 48.1%% and 51.9 respectively, Means of HbA1c and LDL.c at initial visit were (10.8 ± 2 % and 2.9 ± 0.9 mmol/l) and (9.8 ± 2% and 2.6 ± 0.8 mmol/l) after one year of follow up. Our result showed that there was a significant positive correlation between HbA1c and LDL.c at beginning (r= 0.312 ; P= 0.005) and (r= 0.259 ; P= 0.019) after one year of follow up; which means that change in HbA1c over time was significantly associated with a change in LDL.c. Conclusions: As LDL.c considered a major risk factor for coronary heart disease in patients with diabetes, so our study revealed that improved glucose control was associated with a more favourable LDL.c levels and this reflect that in the case of adolescents with type 1 diabetes, good control of diabetes seems to be of paramount importance.

P26. Subclinical Hypothyroidism Ups the Risk of Vascular Complications in Type 2 Diabetes

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Background: The incidence of thyroid dysfunction in diabetic patients is higher than that of the general population. Undiagnosed thyroid dysfunction may affect the metabolic control and enhance cardiovascular, and other chronic complication risks in diabetic patients. Few studies have examined the relationship between subclinical hypothyroidism and vascular complications of type 2 diabetes. Objectives: To find out the relationship between subclinical hypothyroidism (SCH) and vascular complications in patients with type 2 diabetes. Methods: Our cross sectional study included 110 patients with type 2 DM (45 males and 65 females) who were followed at the Diabetes outpatient Clinics in the state of Kuwait during 6 months period. All patients subjected to complete clinical and laboratory data, including thyroid function tests, total cholesterol (TC), triglyceride (TG), HDL-C, LDL-C, urinary albumin, fundus examination, ECG, and Glycosylated hemoglobin. Results: Among 110 patients, 21 (19.1%) Patients had SCH. Patients with SCH were more significantly older, with long duration of diabetes, high HbA1c, total cholesterol and LDL-C than euthyroid group. However, gender (p = 0.076), BMI (p = 0.092), and smoking (P=0.715) were not significantly different between the SCH and euthyroid groups. The SCH group had a higher prevalence of dyslipidemia (p = 0.017), diabetic nephropathy (p = 0.003) diabetic retinopathy (p = 0.004) and IHD (p =0.011) than the euthyroid group while no significant difference in the prevalence of diabetic neuropathy (p=0.420). Conclusions: SCH is a common endocrine disorder in patients with Type 2 diabetes. It could be associated with a higher prevalence of vascular complications in type 2 diabetes. We could not prove a relation between SCH and diabetic neuropathy.

P27. Self-Monitoring Blood Sugar - A Great Impact on Glycemic Control

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Background: Self-Monitoring Blood Glucose is a vital tool to achieve better glycemic control to reduce the risk of complications in the diabetics.The number of diabetics has soared to 387 million, one death every seven seconds (IDF, Diabetes Atlas). UAE has the second highest prevalence of diabetes worldwide. Health costs staggering an estimated 440 million dirham a year (UAE University) several landmark studies have demonstrated that improved glycemic control reduces the risk of complications (DCCT, UKPDS,) AADE supports SMBG to achieve glycemic goals and promote self – care for diabetics. In Rashid Hospital, Diabetology Clinic subjects above twelve years who are not monitoring their blood sugar, mainly UAE nationals and enaya insurance holders of other nationalities from all field of work are included. Methods: Random audit done in the clinic regarding challenges in SMBG and the result shows either no machine or very costly (82%).Emerging the evidence-based practice, since 2013 Glucometer and consumables provided for the eligible candidates through proper channel, funded by DHA. Educating and validating the reports done during each clinic visit. Results: One to one education geared for all clients regarding the effectiveness of SMBG. Sample size 100/1000, selection done in a lottery method. Compared the HbA1C result with the Lab values before and after SMBG. Result shows difference in total 81% improvement. That is 5% reduction in 22% patients, 4% in 18% patients, 3% in 20% subjects, 2% in 11% subjects, and 1% in 10% subjects and 0% reduction in 19% subjects. Conclusions: SMBG plays an important role in glycemic control efforts for both patient and health care provider. It appears to be cost effective. Education and prevention is the cornerstone.

P28. Value of Neutrophil-To-Lymphocyte Ratio in Predicting Diabetic Peripheral Neuropathy

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Background: To explore the relationship between Neutrophil-to-lymphocyte Ratio (NLR) and Diabetic Peripheral Neuropathy(DPN) in Type 2 Diabetes Mellitus. Methods: A total of 557 newly diagnosed T2DM patients were recruited, including 397 T2DM patients without complication（DM group）as well as 160 T2DM patients complicated with DPN （DPN group). One-Way analysis of variance was applied to the data of the two groups, covering the numbers of

neutrophils and lymphocytes as well as the NLR values of peripheral blood and other biochemistry index; Pearson correlation analysis was used to calculate the correlation of NLR and DPN; Risk factors of DPN were estimated via logistic regression analysis. Results: (1) The values of triglyceride (TG), neutrophils, fasting insulin, urinary albumin and 2 hour post-glucose in DPN group were significantly higher than those of the DM group while the quantity of lymphocytes of DPN group were considerably lower than that of the DM group (P<0.05 respectively); NLR values were remarkably higher in DPN group compared with those of DM group（2.58±0.50 vs. 2.18±0.61, P<0.001）; (2) Pearson correlation analysis registered that DPN was positively correlated with NL（r=0.299, p<0.001）; (3) Logistic regression analysis showed that NLR (P=0.002, OR=4.960, 95%CI=1.843-13.349)was a risk factor of DPN.(4) The ROC curve analysis confirmed that the optimal cut off point, specificity and sensitivity in diagnosing DPN by NLR were 2.13, 48.1% and 81.3% respectively. Conclusions: Our results showed that NLR is significantly correlated with DPN, which suggested that NLR may be an independent risk factor of DPN.

P29. Effect of Abundant Protein with Moderate Energy Restricted Diet on Protein and Glucose Metabolism and Body Composition in Adults with Type 2 Diabetes

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Background: Sarcopenic obesity is a consequence of insulin resistance in obese patients with uncontrolled type 2 diabetes (T2DM). Specifically, it results from blunted protein synthesis and increased protein turnover1,2,3. The action of insulin on protein metabolism does not improve when normalizing glucose levels4 or increasing dietary protein alone5. Hypoenergetic diets worsen muscle loss when absolute protein content is not conserved6. Thus, the objective of this study was to investigate whether a 5 weeks energy restriction with consistent protein intake would improve insulin sensitivity of glucose and protein metabolism in obese T2DM adults. Methods: 6 obese T2DM adults were enrolled in a 5 weeks energy-restricted diet (60% of energy requirements), 45% as carbohydrate and 26% as protein (1.8-1.9g/kg lean body mass/day). Isotopic tracers were used to quantify whole-body glucose (3-3H-glucose) and protein (13C-leucine) metabolism both pre- and post- weight-loss, fasting and during a hyperinsulinemic (~500pM), isoglycemic (149.4 ± 9.0 Pre vs. 104.4 ± 5.4mg/dl Post), isoaminoacidemic clamp. Body composition changes were measured by dual-energy x-ray absorptiometry. Results: At 5 weeks of energy restriction, lean mass was preserved and weight-loss accompanied total and visceral fat losses. Fasting plasma glucose was normalized; serum insulin, C-peptide and HOMA-IR decreased significantly by 38%, 38% and 54%, respectively. Postabsorptive rate of protein turnover decreased by 12% and oxidation by 32%. Glucose turnover decreased by 29% and metabolic clearance rate improved by 24%. During clamp, protein turnover and breakdown were reduced by 15% and 12%, respectively, without any improvement in protein synthesis. Conclusions: Consistent protein intake preserves lean body mass with energy restriction and insulin resistance. There was no improvement in protein anabolism, possibly related to the energy deficit state. More research is needed to assess the effect of insulin sensitivity on protein metabolism post weight-loss; this will bring further advances in clinical applicability in sarcopenia.

P30. Refractory Acidosis in a Patient with Newly Diagnosed Type 1 Diabetes Presenting with Diabetic Ketoacidosis

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Background: We present the case of a previously healthy patient presenting with a diabetic ketoacidosis (DKA) on a background of excessive alcohol intake. He had refractory acidosis and was subsequently found to have hypertriglyceridemic pancreatitis. Methods: A 23-year-old Caucasian male was brought to the Emergency Department with altered sensorium and shortness of breath. His past medical history was unremarkable. He had a history of recent significant alcohol intake. Examination revealed tachypnea, tachycardia, respiratory distress and dehydration. Initial bloodwork revealed high anion gap metabolic acidosis: pH 6.78, bicarbonate 1 mmol/L, anion gap 34. Random glucose 573 mg/dL and urine ketones 3+. Creatinine was 1.1 mg/dL. Lipase was 62.4 U/L. Lactate was 3.1 mmol/L. He was treated as a case of DKA with fluids, potassium, insulin and bicarbonate. He was also started on thiamine and empirically covered with antibiotics. However, he eventually required elective intubation and admission to

the intensive care unit (ICU). Blood samples were noted to be lipaemic; triglycerides (TG) came back at 5618 mg/dL. Despite decrease in glucose and closure of anion gap, he remained acidotic and was started on bicarbonate infusion. Lipase increased from baseline. Abdominal imaging was suggestive of pancreatitis. Though his acidosis improved he developed acute kidney injury which required continuous renal replacement therapy (CRRT). He successfully came off dialysis and was extubated and transferred to the general ward. Results: This case is an unusual presentation of type 1 diabetes and demonstrates the importance of looking for alternative causes of acidosis once DKA is adequately treated with successful reduction in glucose levels and closure of anion gap. The patient had high anion gap acidosis, initially thought to be secondary to DKA with possible alcoholic ketoacidosis. Despite improvement in anion gap and glucose levels, he remained acidotic requiring intubation, intravenous bicarbonate infusion and ICU admission. Conclusions: This case is an unusual presentation of type 1 diabetes and demonstrates the importance of looking for alternative causes of acidosis once DKA is adequately treated with successful reduction in glucose levels and closure of anion gap. The patient had high anion gap acidosis, initially thought to be secondary to DKA with possible alcoholic ketoacidosis. Despite improvement in anion gap and glucose levels, he remained acidotic requiring intubation, intravenous bicarbonate infusion and ICU admission.

P31. Profile of Community Acquired infections in Patients with Type 2 Diabetes Mellitus Being Admitted in the Medical Department of a Tertiary Care Hospital in the UAE with Corresponding Hba1c Levels.

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Background: One of the hall marks of diabetes is the increased susceptibility of diabetic patients to infections. Admissions for the various infections comprise an important cause of morbidity and mortality in diabetic patients. It also contributes to a huge financial and manpower burden to the health care resources of a country. This study was designed to study the various community acquired infections for which adults with type 2 diabetes come for admission to the Medical department of a tertiary care Government hospital in the United Arab Emirates. Methods: 50 patients of type 2 diabetes who were admitted with various community acquired infections to the Medical Ward were enrolled. Exclusions were patient with type 1 diabetes and those with non infective causes for admission. Diabetic patients who were admitted for non infective illnesses and then developed infections while in the hospital were also excluded from the study. Data on the age, gender, type of infection based on organ systems and corresponding HbA1c levels were collected. Infections were broadly classified as per the system involved such as respiratory tract infections (including pneumonias and other lower respiratory tract infections), urinary tract infections (comprising cystitis, pyelonephritis and other infections of the genitourinary tract), gastrointestinal infections and others. Results: Males comprised the majority (60%) of the studied group. In studied group as a whole ,urinary tract infections was the commonest infection for which diabetic patients were admitted. In diabetic males, Respiratory tract infections were the commonest cause of admission whereas in females Urinary tract infections formed the main cause for admission. The average HbA1c in diabetic males with Respiratory tract infection was 7.6gm% while the average value in diabetic females with Urinary tract infections was 8.2gm%. Conclusions: Respiratory and urinary tract infections are the main infective pathologies with which adult diabetic male and females(1) patients, respectively, are admitted in the Medical Ward. Interestingly the overall level of diabetic control (as evidenced by the HbA1c levels) did not appear to be very poor. In light of the above, specific focus on appropriate measures to prevent and control these infections from worsening so as to require inpatient care as vaccinations,(1) early detection and treatment would help in decreasing the inpatient burden relating to these pathologies. More directed research into early detection and prevention of these two major classes of infections specifically in diabetic populations would result in fewer admission for the same thereby translating to improved outcomes and cost savings in the long run.

P32. The Incidence of Hypoglycemia Among Insulin-Treated Patients with Diabetes: UAE Cohort of IO HAT Study.

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Background: The non-interventional International Operations Hypoglycemia Assessment Tool (IO HAT) study assessed hypoglycemia incidence in patients with insulin-treated diabetes in Bangladesh, Colombia, Egypt, Indonesia, Philippines, Singapore, South Africa, Turkey and UAE. Methods: Hypoglycemia incidence was assessed across 25 sites in the UAE. Hypoglycemic events (any, nocturnal or severe) were reported in self-assessment questionnaires (SAQs) based on capillary blood glucose or symptoms. Retrospective events (severe events 6 months before baseline and any event 4 weeks before baseline) were recorded in SAQ1 and prospective events (4 weeks from baseline) were recorded in SAQ2 and patient diaries. Differences in hypoglycemia incidence reported in the retrospective and prospective periods were assessed using two-sided tests. Results: Of the 7289 patients assessed in IO HAT, 325 were enrolled in the UAE (type 1 diabetes [T1D] n=82, type 2 diabetes [T2D] n=243). Approximately 81% completed patient diaries in the prospective period; of these, 40.0% of patients with T1D and 20.8% of patients with T2D reported at least one confirmed hypoglycemic event in their patient diary. Higher rates of any hypoglycemia were reported retrospectively versus prospectively in patients with T1D or T2D. Retrospectively, hypoglycemia was reported by 71.4% of patients with T1D and 56.3% of patients with T2D. The majority of patients reported events during the prospective period (T1D 95%; T2D 91.9%). Nocturnal hypoglycemia incidence was significantly lower ($p<0.001$) in the prospective versus retrospective period for T1D and T2D. In contrast, higher rates of severe hypoglycemia were reported prospectively versus retrospectively in both T1D and T2D ($p=0.682$ and 0.142, respectively). Conclusions: These results, the first patient-reported dataset on hypoglycemia in insulin-treated patients with diabetes in the UAE, indicate that higher rates of any or nocturnal hypoglycemia were reported retrospectively than prospectively. Conversely, higher rates of severe hypoglycemia were reported prospectively than retrospectively, indicating severe hypoglycemia may be underestimated retrospectively in this cohort.

P33. Baseline Characteristics of Patients initiating insulin Treatment for Type 2 Diabetes in the Middle East and North Africa: Evidence from the VISION Study.

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Background: The Verifying Insulin Strategy and Initial Health Outcome ANalysis (VISION) is an 18-month, 9-country, observational study describing treatment approaches/decisions, clinical effectiveness, cost/resource use, and treatment patterns among patients with type 2 diabetes initiating insulin therapy in the Middle East and North Africa (MENA) and Western Pacific regions. This subgroup analysis of VISION summarizes the baseline characteristics of patients in the MENA region.Methods: A total of 1136 patients were enrolled from 4 countries in the MENA region: Algeria (n=179), Egypt (n=640), Saudi Arabia (n=261), and the United Arab Emirates (UAE; n=56). Patients had to be aged ≥18 years and initiating insulin therapy. Results: Mean glycated hemoglobin (HbA1c) at baseline was 9.26% in Algeria, 10.14% in Egypt, 9.86% in Saudi Arabia, and 9.69% in the UAE; the proportion of patients with HbA1c ≥9% ranged from 44.0% (Algeria) to 78.9% (Egypt). Mean duration of diabetes ranged from 8.6 years (Egypt) to 10.5 years (UAE). Basal insulin was most commonly prescribed in Algeria (72.6%), Saudi Arabia (90%), and the UAE (76.8%), whereas premixed insulin was most commonly prescribed in Egypt (71.9%). The proportion of patients required to pay the full cost of insulin treatment was 3.9% in Algeria, 70% in Egypt, 17.2% in Saudi Arabia, and 12.5% in the UAE. Conclusions: Conclusions: A large proportion of patients in the MENA region enrolled in the VISION study had elevated HbA1c levels and a long history of diabetes before insulin initiation. Several differences in the baseline characteristics of patients were noted between countries. Disclosures: This study was supported and conducted by Eli Lilly and Company, Indianapolis, IN, USA. This is an encore of an abstract that will be presented at the Arabic Diabetic Forum – 7th Arab Diabetes Forum; September 21 – 23, 2016; Cairo, Egypt.

P34. Glycemic Outcomes in Timely and Delayed insulin-initiated Patients with Type 2 Diabetes

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Background: To compare timely vs delayed insulin-initiated patients with type 2 diabetes (T2D) by their medium- (2-year) and long-term (5-year) glycemic outcomes in general practice in the United Kingdom (UK). Methods: This retrospective cohort study used the UK Clinical Practice Research Datalink to assess the glycemic control of patients with T2D initiating insulin during 2005-2012. Timely/delayed initiation cohorts were defined by the elapsed time between the recommended insulin initiation point (persistent HbA1c ≥7.5% with ≥2 noninsulin agents) and the actual initiation date (≤1 or >1 year, respectively). We used matched samples by propensity scores adjusting for baseline characteristics for comparing glycemic outcomes. Results: In total, 12,367 patients had sufficient HbA1c/noninsulin agent data for the definition of timely (N=2702)/delayed (N=9665) (Table). The algorithm resulted in 2300 comparable patients in each cohort. Based on the matched samples, the time to achieve HbA1c targets of ≤7%, 7.5%, or 8% was significantly shorter in the timely cohort (p<.0001 for all three by log-rank test), and there was a significant difference in time needed to reach a 1% reduction from baseline (p<.0001). Mean HbA1c values during the fifth year post initiation were similar, but mean HbA1c post initiation was significantly lower (-0.25%, 95% CI (-0.34%, -0.15%), p<.0001 by paired t-test) in the timely (8.38±1.53%) vs delayed cohort (8.63±1.60%). Conclusions: In UK clinical practice, delaying insulin initiation >1 year was associated with longer time to achieve glycemic targets and poorer glycemic control post initiation. Irrespective of initiation timing, glycemic control in both cohorts remained suboptimal, with mean HbA1c values above recommended targets.

P35. Efficacy of Insulin Analogues in Diabetic Patients Attending Primary Care Centers

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Background: To measure the efficacy of new insulin analogues compared to the conventional types of insulin, and to compare the effect on patient satisfaction regarding the weight changes, the frequency of hypoglycemic attack. Methods: The study was done to compare the conventional insulin with the recently introduced insulin analogues to the primary care centers in Jeddah, regarding their efficacy and potency over 12 and 24 weeks successively. A retrospective observational cohort non-interventional study was done on an eligible sample of 122 diabetic patients. Results: The two groups were similar in their baseline demographic features. After 12 weeks, There was a drop in the means HBA1c of (-0.88) for the analogue type and (-0.19) for the conventional type, the difference was not statistically significant. After 24 weeks, the mean drop in the HBA1c was (-2.02) for the analogue type and (-1.12) for the conventional type, the difference was not statistically significant. For the satisfaction out of the 62 who were on insulin analouges 54 (87%)were satisfied, but only 23 (38%)were satisfied with the conventional insulin. There was a significant difference in Insulin satisfaction (P value 0.0005). Relative risk 2,724 CI (p1.727-4.296). Conclusions: In conclusion, although there was an apparent small difference in the efficacy of Insulin analouges over the conventional type, that difference was not statistically significant. Although patients were more satisfied in the analogues groups since it caused less hypoglycemia and weight gain, those who were satisfied on the conventional insulin refused to convert. So in primary care centers, introduction and use of the insulin analouges should be encouraged, but the patient preferences should be respected and the physician and resources limitations should be addressed.

P36. Inter-Relationship Between Type 2 Diabetic Retinopathy and Coronary Artery Disease Prevalence with Risk Factors assessment

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Background: This study evaluated the relationship between diabetic retinopathy (DR) and coronary artery diseases (CAD) in type 2 diabetes mellitus (DM) patients taking the concern of risk factor assessment. Methods: Type 2 diabetes subjects (n = 113) were selected from outpatient diabetes clinics in the state of Kuwait during 6 months period. Data collected regards to age, gender, smoking status, duration of DM, BMI, blood pressure, HbA1c, lipid profile, medications, presence of CAD, and fundoscopy according to the International Clinical Classification of Diabetic Retinopathy. Results: The prevalence of CAD was higher among subjects with DR compared with those without DR (44.2% vs. 19.7%; P = 0.005). Logistic regression analysis revealed that independent risk factors for CAD were age and triglyceride (TG) level, while those for retinopathy included insulin and Total Cholesterol (TC) level. Conclusions: This retrospective study demonstrated a link between macroangiopathy and microangiopathy in subjects with type 2 DM, i.e., the occurrence of CAD increased with the progression and severity of retinopathy. We recommend repeated fundus examination at least yearly not only for preserving their vision, but also for early detection of cardiac ischemic events.

P37. The BNP assay as a Marker of Early Diastolic Dysfunction in Type 2 DM

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Background: Several studies have revealed that BNP levels may reflect diastolic dysfunction.But, few studies demonstrated the role of BNP in early detection of diastolic dysfunction in diabetic patients. Hence there is a need, for recognizing those with asymptomatic left ventricular diastolic dysfunction, and at a risk of developing clinical HF.the study is aimed at evaluating the role of BNP in the early identification of diastolic dysfunction. Methods: 60 patients with type 2 DM were included in the study of those attending medical and diabetic polyclinic in the state of Kuwait through a period of 6 months in 2012. Results: The mean age of the patients was 53.87 ± 7.98 years. They were 23 (38.3%) males and 37 (61.7%) females. A total of 20 patients (33.3%) out of 60 patients were diagnosed with LVDD. The patients with LVDD had a higher BNP levels (P=0. 000**) in comparison to the patient without LVDD. Receiver operating characteristic curve (ROC) was generated for identifying the sensitivity and specificity of the BNP and the area under the curve was 1.000 at a cutoff value <92 pg/ml was 100% specificity and 100% sensitive for detecting the presence or absence of LVDD by echocardiography with 100% PPV and 100% NPV. Conclusions: The BNP assay could be used as a marker of early LV diastolic dysfunction in diabetic patients for early prevention and management of overt heart failure.

P38. The Use of Neutrophil-To-Lymphocyte Ratio in Predicting Intracerebral Hemorrhage with Type 2 Diabetes Mellitus

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Background: Chronic systematic inflammation has been suggested to be associated with the occurrence and development of cardiovascular events. Low-grade systematic inflammation persists in Type 2 Diabetes Mellitus(T2DM) patients. In addition, the risk of cerebral hemorrhage in these patients is increased compared with non-diabetic patients. Neutrophil-to-Lymphocyte Ratio (NLR) is the ratio derived by dividing the neutrophil count with the lymphocyte count from a peripheral blood sample. This study aimed to explore the relation between NLR and cerebral hemorrhage and to prove that the NLR is an independent risk factor of cerebral hemorrhage in T2DM patients. Methods: In total, 429 cases of T2DM patients were included. The patients were divided into two groups depending on the presence of cerebral hemorrhage: the cerebral hemorrhage group (n=87) and the control group (n=342). Based upon clinical and laboratory data of diabetes diagnosis, this article investigates the relationship between the NLR and risk of cerebral hemorrhage. Results: The increase in the NLR was positively correlated with the incidence of cerebral hemorrhage in T2DM patients and might serve as an independent risk factor of cerebral hemorrhage in T2DM patients (OR 4.451 95% CI 2.582-7.672). NLR= 2.58 might be useful in predicting the threshold value of cerebral hemorrhage risk in newly diagnosed T2DM patients (area under the curve 0.72, 95% CI 0.659-0.780, P<0.001) Conclusions: As an indicator of the degree of systematic inflammation, NLR is an independent risk factor of cerebral hemorrhage in T2DM patients.

P39. G6PD Deficiency Induced Hemolysis in Newly Diagnosed Diabetic Patient After Normalization of Hyperglycemia.

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Background: The correlation between diabetes and G6PD deficiency is still a matter of debate. Hemolysis due to G6PD deficiency in patients with diabetes (DM) has been reported, but is uncommon. To date, 23 cases have been reported from 12 different countries. Methods: A 19-year-old Saudi female patient in whom hemolytic crises occurred soon after normalization of hyperglycemia and revealed a G6PD deficiency. We review the pertinent literature of this phenomenon. Results: This patient was admitted for newly diagnosed type 1 diabetes, without ketoacidosis, managed by intravenous fluid hydration and subcutaneous insulin injection. Hemolytic crises were recognized 5 days after achieving euglycemic state, and G6PD deficiency was confirmed. This was managed by blood transfusion.The hemolytic anemia in reported patients occurs between one to 14 days in newly diagnosed diabetic patients or decompensation of diabetes with or without acidosis. Most of the patients were managed by hydration and insulin; few are managed by oral hypoglycemic medication. Multiple hypothesis are used to explain the association between diabetes and hemolysis due to G6PD deficiency in these patients. Conclusions: To reduce the risk of hemolysis, in an area with high incidence of G6PD deficiency, screening of the enzyme activity should be considered in newly diagnosed diabetics. In case of G6PD deficiency, it is better to correct plasma glucose gradually in order to avoid the rapid decline in glucose availability.

P40. 17 A Hydroxylase Deficiency in Two Saudi Siblings Presenting as Hypertension and Hypokalemia

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Background: 17-Alpha hydroxylase is a rare form of congenital adrenal hyperplasia (CAH) that is inherited as autosomal recessive and accounts for less than 1 % of the cases of CAH. It results from mutations within the CYP17A1 gene located on chromosome 10q24-q25, and leads to failure to synthesize cortisol, adrenal androgens and gonadal steroids. Methods: The clinical, biochemical and genetic evaluation of two Saudi siblings diagnosed with the 17 alpha hydroxylase deficiency will be presented. Results: : The index case is a 21 years old Saudi female who was referred from the gynecology department for assessment of hypertension and hypokalemia since the age of 9 years old. The patient has primary amenorrhea, absent secondary sexual characteristics and primary gonadal failure. Both plasma aldosterone and plasma renin concentrations were low at 1.8 ng/dl (2.2-35) and <1.0 ng/L, respectively. Further work up revealed absent uterus and ovaries on US pelvis and a 46 XY male karyotype. Additional tests showed low serum testosterone < 0.12, nmol/L, low serum cortisol at 100 nmol/L, high serum ACTH at 113.4 pmol/L (1.6-13.9), and suppressed 11 Deoxycortisol < 5 ng/dl. 17 α hydroxylase deficiency was suspected and this was further supported by extremely high serum Deoxycorticosteroid (DOC) level at 388 ng/dl (2-19). Genetic testing confirmed a homozygous nonsense mutation in the CYP17A1 gene (c.987 C>G, p.329 Y>X). The sister of the index case is 16 years old and has similar presentation with hypertension, hypokalemia, primary gonadal failure and primary adrenal insufficiency; however, she has a female 46 XX karyotype. Her genetic testing revealed the same mutation. Both patients were started on Dexamethsone with very good control of the BP and correction of long standing hypokalemia. Conclusions: The diagnosis of 17-α hydroxylasdeficiency is challenging, both for the patient and the endocrinologist. The psychosocial and reproductive implications of the diagnosis are huge and require a multidisciplinary approach.

P41. Clinical Study Octreotide Dose Escalation as Primary and Secondary Therapy for Patients with Acromegaly.

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Background: To evaluate efficacy of dose escalation of octreaotide – long – acting – repeatable (LAR) from 20 to 40 mg every 28 days intramuscularly in a sample of acromegalic patients whose biomarkers fail to drop down

to the recommended targets after using LAR for a year (20 mg every 28 days). Methods: in 17 acromegalic patients using octreotide LAR 20 mg every 28 days fail to reduce GH <2.5 ug/L and IGF-1 to the recommended level. The dose was doubled for 6 months, in order to achieve the recommended goals of GH and IGF1. The patients were divided to 2 groups in each occasion [Those harboring microadenoma versus macroadenoma; Patients with previous hypophysectomy versus those with no prior hypophysectomy; Males versus females; Those with a disease duration ≥ 10 years versus those with a disease duration of < 10 years]. Sonogram of the abdomen and oral glucose tolerance test were done prior to recruitment and at the end of the study. Results: growth hormone (GH) and IGF-1 levels drop by 62.5 % and 37% respectively on 40 mg monthly LAR in those who underwent hypophysectomy and by 63.5% and 38% respectively in those with no history of hypophysectomy. Those 2 biomarkers drop by 61.4% and 35.3% in those harboring macroadenoma and by 70% and 42% in those harboring microadenoma. The decrement of GH, and IGF-1 was found to be 70% and 41.9% respectively in those with disease duration ≥ 10 years and by 66.9% and 34.8% in those with disease duration <10 years. In males these biomarkers drop by 63% and 38% while in females, they drop by 59% and 31% 6 months after doubling the dose of octreotide – LAR. No patient developed impairment of glucose tolerance or gall stones at the end of study period. Conclusions: Increasing the dose of LAR from 20 to 40 mg every 28 days in acromegalic patient, resistant to the conventional dose of LAR is found to be fruitful in reducing GH and IGF-1 by significant percentage irrespective of gender, disease duration, previous hypophysectomy or harboring micro or macroadenoma.

P42. Sheehan's Syndrome: The Value of Pituitary MRI Scan in Early Diagnosis.

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Background: Postpartum hemorrhage has been recognized as a cause of hypopituitarism and is called Sheehan's syndrome since 1937. It is characterised by varying degrees of anterior pituitary hormone with rare affection of posterior pituitary component. Sheehan's syndrome usually present with insidious symptoms and less often diagnosed at acute stage. MRI finding of empty sella syndrome at later stage support the diagnosis of Sheehan's syndrome. Treatment consist of replacing the essential hormones deficient. Methods: A 32 year old woman, gravida V was admitted to the obstetric service with intrauterine fetal death due to placental abruption for termination of pregnancy. During admission she developed severe postpartum hemorrhage and required aggressive resuscitation. Her past medical history was significant for subclinical hypothyroidism which was treated with Levothyroxine 25 mcg. Results: She complained of severe headache in the first postpartum day for which CT and MRI brain were undertaken. The findings were consistent with enlarged pituitary with features suggestive of infarction. Hormone profiles including cortisol, plasma ACTH, thyroid hormones, TSH, FSH, LH and prolactin were all low confirming the diagnosis of panhypopituitarism (cortisol: 15.6nmol/L (101-535 nmol/L), ACTH of 2.2pg/ml (7-50 pg/ml), prolactin: 14.4ng/ml (5.18-26.5 ng/ml), TSH: 0.45mIU/ml (0.48-6.3 mIU/ml), FSH: 0.17 mIU/ml (3.04-8.08 mIU/ml), LH: 0.02 mIU/ml (1.8-11.7 mIU/ml), T4: 8.26 pmol/L(9.0-17.1 pmol/L), T3 2.7 pmol/L(3.39-5.82 pmol/L), estradiol < 37 pmol/L (77-921 pmol/L). She underwent glucagon stimulation test for cortisol and growth hormone and it confirms the presence of cortisol and growth hormone deficiency with flat response. She was started on steroid replacement and Levothyroxine dose was increased to 50 mcg. Three weeks later she started to complain of symptoms suggestive of diabetes insipidus. Her formal water deprivation test was diagnostic of cranial diabetes insipidus. Conclusions: This case illustrate the dramatic course of complete loss of anterior pituitary hormones in few days followed by posterior pituitary hormone deficiency unmasked by steroid replacement. Pituitary imaging with MRI was valuable tool to predict early changes and has possible rule to play in high risk postpartum patients to facilitate an early diagnosis of Sheehan's syndrome

P43. Frequency of Lipohypertrophy and associated Risk Factors in Young Type 1 Diabetes Patients in Saudi Arabia

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Background: To investigate the frequency of lipohypertrophy (LH) and the associated risk factors in young, type 1 diabetes mellitus (T1DM) patients. Methods: This cross-sectional study was conducted on a

sample of 174 T1DM patients (13-18 years of age), treated with multiple daily insulin (MDI) injections for a minimum of one year duration. The study was done at the Diabetes Treatment Center, Prince Sultan Military Medical City (PSMMC), Riyadh, Saudi Arabia, between July 2015 and September 2015. We recorded patient information regarding the age, weight, height, adjusted body mass index, period of the diabetic condition, length of needle, number of injections every day, injection locations, insulin regimen and HbA1c. LH was assessed using the palpation technique. Results: Nearly 46% of the patients were found to reuse the needles while 42.5% of them failed to alternate the injection site and 23% revealed hypos. A substantial percentage of the patients, about 47%, showed grade 1 LH followed by 33.7% who had grade 2 and 19.3% who revealed grade 3. A higher frequency was observed in the thigh region (n=28, 33.7%) than the arm which was second (n=23, 27.7%). Patients' ≥16 years of age showed higher LH than those <16 years. Patients having uncontrolled diabetes mellitus had a greater likelihood of having LH (89.2%) than those with controlled diabetes (10.8%). Significant differences in LH were observed based on needle length, needle reuse and rotation of the injection sites. On performing regression analysis the independent risk factors for LH were found to be as follows: higher BMI, higher HbA1c, more number of injection sites and higher rate of needle reuse. Conclusions: As the frequency of LH was found to be high in the Saudi T1DM population, it is essential to educate patients regarding the risks and diabetic control.

P44. Calculated Adiposity and Lipid indices in Healthy Arab Children as influenced by Vitamin D Status.

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Background: Both childhood obesity and vitamin D deficiency are common in the Middle East. This study aims to determine whether the associations of vitamin D status to traditional anthropometric parameters hold true for non-conventional measures of adiposity, such as body adiposity index (BAI), a measure of body fat percentage, waist-to-hip ratio (WHR), waist-to-height ratio (WHtR), as well as lipid indices, in apparently healthy Arab children. Methods: A total of 4183 apparently healthy Saudi school students (1906 boys; 2277 girls) aged 12-17 years were recruited in this cross-sectional study. Anthropometrics were obtained. Fasting blood glucose and lipids were measured routinely. Serum 25(OH)D was measured using chemiluminescence. Results: In all subjects, age, BAI, WHR and HDL-cholesterol accounted for 4% of the variance in serum 25(OH)D ($p<0.001$). All adiposity indices were inversely associated with 25(OH)D, with WHtR being the most inferior in terms of strength of association. Vitamin D deficiency significantly increased risk for low HDL-cholesterol in all subjects [Odds ratio (95% Confidence Interval) 1.70 (1.24-2.3); $p<0.001$)]. Conclusions: BAI is significantly associated with 25(OH)D levels in Arab children. WHtR is inferior than other anthropometric measures of obesity regarding the strength of association with 25(OH)D. Risk for or low HDL-cholesterol is significantly increased with vitamin D deficiency. Interventional studies may determine the potential cardioprotective effects of vitamin D correction in this population.

P45. Obesity and Semen Quality

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Background: The presenting author has adequate experience in andrology and semen analyses evidenced by the publications. He holds a Ph D degree with more than 25 years experience. Methods: The semen analyses was carried out by standard WHO method and the hormones by specific enzyme Immuno assays. Results: There was no significant correlation between obesity and the quality of semen. There was decline sperm density, motility and increase in abnormal spermatozoa with respect to the age. The total testosterone level was also reduced in patients with advanced age. Conclusions: The study shows that obesity may not be associated with assessing quality of semen or reproductive hormones. there was a significant correlation between semen parameters and total testosterone with age.

P46. Adipocytokine Visfatin in Patients with Polycystic Ovary Syndrome.

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Background: Visfatin, a protein secreted by adipose tissue, is suggested to play a role in the pathogenesis of insulin resistance. In polycystic ovary syndrome (PCOS), insulin resistance might be involved in the development of endocrine and metabolic abnormalities. Polycystic ovary syndrome (PCOs), is a common endocrine disorder affecting up to 10% of women of reproductive age, is expressed as chronic anovulation and hyper-androgenism. High serum visfatin was found to be associated with insulin resistance and markers of hyper-androgenism in lean PCOS patients. Objectives: To assess plasma visfatin concentrations in women with polycystic ovary syndrome and its correlation with their BMI. Methods: visfatin, fasting glucose, fasting insulin, homeostasis model assessment (HOMA)-IR, cholesterol (total, HDL, LDL),triglyceride, LH/FSH ratio, and BMI, waist circumference were measured and pelvic ultrasound done in a group of 24 female with PCOS(12 lean,12 obese)and 20 healthy control(10 lean,10 obese). Results: as regard differences between lean and obese PCOS we found significant differences as regard visfatin, Fasting insulin , HOMA-IR, cholesterol, BMI and highly significance difference as regard LDL with no significant differences as regard, FBG,LH/FSH ratio ,TG. Also we found significant positive correlation (P<0.05) between visfatin & BMI, cholesterol, wt in lean PCOS and HOMA-IR, LH/FSH ratio in obese PCOS. Conclusions: we concluded that women with PCOS exhibit higher visfatin level, more in lean cases than obese PCOS and their control, also visfatin associated with insulin resistance state that accompany the obese PCOS.

P47. Weight Loss and associated Improvements in Cardiometabolic Risk Factors with Liraglutide 3.0 Mg in the SCALE Obesity and Prediabetes Randomized, Double-Blind, Placebo-Controlled 3-Year Trial

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Background: Obesity and prediabetes are risk factors for developing T2D. 5-10% weight-loss can reduce risk of developing T2D by about 50%. The 3-year part of this Phase-3 trial investigated effects of 160-week treatment with liraglutide 3.0 mg, as adjunct to diet+exercise, on delaying onset of T2D over 3 years (primary endpoint), body-weight and cardiometabolic risk factors in adults with prediabetes and BMI ≥30kg/m2, or ≥27kg/m2 with comorbidities. Methods: Individuals were randomized 2:1 to once-daily subcutaneous liraglutide 3.0mg (n=1505) or placebo (n=749) and advised on a 500-kcal/day-deficit diet and ≥150-min/week exercise. Efficacy data are observed means, with last-observation-carried-forward (LOCF) imputation. Clinicaltrials.gov:NCT01272219. Results: Baseline characteristics were (mean±SD): 47.5±11.7 years, 76.0% female, 107.6±21.6kg, BMI 38.8±6.4kg/m2. With continued treatment over 160 weeks, estimated time to T2D onset was 2.7-times longer with liraglutide than placebo [95%CI 1.9;3.9, p<0.0001], corresponding to HR 0.2. Based on Kaplan-Meier plot of T2D diagnosis cumulative probability, accounting for censoring, 3% patients on liraglutide vs. 11% on placebo were diagnosed with T2D by Wk160 while on treatment. More individuals on liraglutide (66%) than placebo (36%) had regressed to normoglycemia at Wk160 while on treatment (OR 3.6 [95%CI 3.0;4.4], p<0.0001). Individuals lost more weight on liraglutide than placebo (6.1% vs 1.9%; ETD-4.3% [95%CI 4.9;-3.7]), accompanied by greater mean reductions in waist-circumference (ETD 3.5 [4.2; 2.8] cm), SBP (ETD 2.8 [-3.8;-1.8] mmHg), triglycerides (ETD -6%[9;-3]) and hsCRP (ETD 29% [-34;-23]) (all<0.001). Mean pulse increased with liraglutide vs placebo (ETD 2.0 [1.2;2.7] beats/min, p<0.0001). AE incidence was 94.7% with liraglutide vs 89.4% with placebo, serious AEs 15.1% vs 12.9%. Adjudicated MACE (non-fatal MI, stroke, cardiovascular death) were low (0.19 vs 0.20 events/100 patient-years-of-observation for liraglutide 3.0mg vs placebo). Conclusions: Liraglutide 3.0mg for 3 years, as adjunct to diet+exercise, was associated with lower risk of T2D, reduced body-weight and improved cardiometabolic risk factors, compared with placebo.

P48. A Rare Case of Thyrotoxicosis Arising as a Paraneoplastic Syndrome

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Background: We describe a 40-year-old female who presented with fine tremors, weight loss, tachycardia and dyspnea. There were no signs of goiter or thyroid eye disease. Thyroid function tests showed biochemical hyperthyroidism: [fT4 >100 pmol/L (NR: 12–22), TSH <0.005 mu/L (NR: 0.270–4.200)]. Chest x-ray showed well defined multiple rounded nodules. Urine pregnancy tested positive, confirmed by impressive blood B-HCG level of 729,013 IU/L (N :< 5 IU/L). Patient was admitted as a case Hyperthyroidism associated with elevated β-human chorionic gonadotropin (B-HCG) and diffuses lung metastasis highly suggestive of Choriocarcinoma. After the first cycle of chemotherapy, the concentration of B-HCG dramatically decreased and the patient became euthyroid, allowing us to discontinue antithyroid medications. Hyperthyroidism was triggered by stimulation of the thyroid gland by high B-HCG levels. This case illustrates the rare occurrence of thyrotoxicosis arising as a paraneoplastic syndrome due to Choriocarcinoma. This case highlights the importance of a comprehensive clinical history and examination for patients presenting with hyperthyroidism to reach to correct lifesaving diagnostic and therapeutic modalities. Methods: We describe a 40-year-old female who presented with fine tremors, weight loss, tachycardia and dyspnea. There were no signs of goiter or thyroid eye disease. Thyroid function tests showed biochemical hyperthyroidism: [fT4 >100 pmol/L (NR: 12–22), TSH <0.005 mu/L (NR: 0.270–4.200)]. Chest x-ray showed well defined multiple rounded nodules. Urine pregnancy tested positive, confirmed by impressive blood B-HCG level of 729,013 IU/L (N :< 5 IU/L). Patient was admitted as a case Hyperthyroidism associated with elevated β-human chorionic gonadotropin (B-HCG) and diffuses lung metastasis highly suggestive of Choriocarcinoma. After the first cycle of chemotherapy, the concentration of B-HCG dramatically decreased and the patient became euthyroid, allowing us to discontinue antithyroid medications. Hyperthyroidism was triggered by stimulation of the thyroid gland by high B-HCG levels. This case illustrates the rare occurrence of thyrotoxicosis arising as a paraneoplastic syndrome due to Choriocarcinoma. This case highlights the importance of a comprehensive clinical history and examination for patients presenting with hyperthyroidism to reach to correct lifesaving diagnostic and therapeutic modalities. Results: We describe a 40-year-old female who presented with fine tremors, weight loss, tachycardia and dyspnea. There were no signs of goiter or thyroid eye disease. Thyroid function tests showed biochemical hyperthyroidism: [fT4 >100 pmol/L (NR: 12–22), TSH <0.005 mu/L (NR: 0.270–4.200)]. Chest x-ray showed well defined multiple rounded nodules. Urine pregnancy tested positive, confirmed by impressive blood B-HCG level of 729,013 IU/L (N :< 5 IU/L). Patient was admitted as a case Hyperthyroidism associated with elevated β-human chorionic gonadotropin (B-HCG) and diffuses lung metastasis highly suggestive of Choriocarcinoma. After the first cycle of chemotherapy, the concentration of B-HCG dramatically decreased and the patient became euthyroid, allowing us to discontinue antithyroid medications. Hyperthyroidism was triggered by stimulation of the thyroid gland by high B-HCG levels. This case illustrates the rare occurrence of thyrotoxicosis arising as a paraneoplastic syndrome due to Choriocarcinoma. This case highlights the importance of a comprehensive clinical history and examination for patients presenting with hyperthyroidism to reach to correct lifesaving diagnostic and therapeutic modalities. Conclusions: This case illustrates the rare occurrence of thyrotoxicosis arising as a paraneoplastic syndrome due to Choriocarcinoma. This case highlights the importance of a comprehensive clinical history and examination for patients presenting with hyperthyroidism to reach to correct lifesaving diagnostic and therapeutic modalities.

P49. Carbimazole induced Cholestatic Jaundice a Case Report.

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Background: Thyrotoxicosis is common disorder present in 1.3% of general population and affects predominantly females (7 to 10:1). Most of the patients tolerate anithyroid medications well. Side effects effects occur in 3-12% of treated patients. The most feared side effect is agranulocytosis with occurrence of 0.2% to 0.3% of the treated patients1. Hepatotoxicity is another major side effect of anti-thyroid drugs. Estimates regarding the

frequency of this condition are imprecise, but it probably ranges from 0.1 percent to 0.2 percent2.This consist of chloestatic hepatitis and hepatic failure. We are presenting a rare case of cholestatic hepatitis in a 50 years old gentleman from Philippines who developed severe jaundice in one month after starting carbimazole. Methods: Mr X, 50 years old gentleman from Philippines, presented to our clinic on 21th June 2015 with history of weight loss around four kg in approximately four months, chronic excessive sweating, and anxiety like symptoms of recent onset. He didn't have significant past medical history. Clinically he was looking anxious. His heart rate was 110/min and was regular and blood pressure was 120/50 mm Hg. He didn't have goiter and there was no exophthalmos. Initial impression was thyrotoxicosis and thyroid functions requested. Lab revealed thyrotoxicosis with suppressed TSH and both elevated FT4 and FT3(table-2). Thyroid Receptor antibodies (TRAb) sent and referred for thyroid scan and started on propranolol and Carbimazole 20mg daily. He sought another opinion and his Carbimazole dose was increased to 45mg/day. Thyroid scan was not done. The TRAb turned out positive. He came back on 4th August with history of yellowness of sclera for three days and and loose and clay colored stools. Labs were repeated see table-1/graph. Drug induced cholestatic hepatitis was diagnosed and Carbimazole was stopped and asked follow in one week. Liver functioned further worsened and bilirubin level reached 30md/dl after one week follow up. He was referred to gastroenterologist. Viral screening for hepatitis were negative. He was extensively investigated with Ultrasound abdomen, CT abdomen and MRCP to rule out any obstructive reason for cholestasis and all were negative, suggesting the only possible cause Carbimazole induced Cholestatic Hepatitis.He was admitted twice in the hospital for supportive treatment and steroids were given in tapering doses and had relapse after steroids reduced. Again steroids increased for another two weeks and then finally his liver functions normalized. Apart from steroids he was treated with iv fluids, Ursodeoxycholic acid, Cholestyramine, lactulose and Propranolol. Serial laboratory results are shown in graphs and tables below. His was offered for radioactive iodine therapy initially he declined and as the thyroid functions were also improving so he given given time as he was very reluctant for any theraoy. On follow up he remained in subclinical hyperthyroidism and monitored closely. His disease later had complete remission without any further treatment. Final Diagnosis: Carbimazole Induced Cholestatic Hepatitis, Grave`disease Results: Billirubin direct and total is increased suddenly to 25mg/dl after about 3weeks and peaked 30mg/dl on 8th August and the dropped gradually in one month with treatment with steroids. Conclusions: Cholestatic hepatitis is rare complication of thionamides. It is even much less common with Carbimazole compared with Propythiouracil. A literature survey published in 1997 reported 49 cases of hepatotoxicity, 28 associated with Propylthiouracil (including seven deaths) and 21 associated with Methimazole (including three deaths)-4. There was no relationship between a fatal outcome and either the dose or duration of thionamide treatment. However, additional reports of severe propylthiouracil related liver failure from the US Food and Drug Administration (FDA) Adverse Event Reporting System have raised concern about the routine use of propylthiouracil -5,6. The rare hepatic abnormalities associated with Methimazole and carbimazole are typical of a cholestatic process-7. Biopsy specimens show preserved hepatocellular architecture, along with intracanalicular cholestasis and mild periportal inflammation. Complete, but slow, recovery is the rule after drug discontinuation. Since the mechanisms of hepatotoxicity for the two antithyroid drugs used in the United States differ, the alternative agent could be used cautiously to treat the underlying hyperthyroidism in a patient with complicated thyrotoxicosis and drug-induced hepatic side effects-7,8. One large cohort from Taiwan revealed that MMI/CBM and PTU exert dissimilar incidence rates of hepatotoxicity. Compared to PTU, MMI/CBM are associated in a dose-dependent manner with an increased risk for hepatitis while the risks are similar for acute liver failure and cholestasis. Our case was diagnosed as case of Carbimazole Induced Cholestatic Hepatitis, after all the possible causes were ruled like viral hepatitis and obstructive lesion. In this case even after stopping the carbimazole liver functions continued deterioration. Particularly serum bilirubin increased to very high level(30mg/dl). There was evidence based treatment protocol available so I discussed the case with one senior gastroenterologist, and he kindly agreed to take care. As there were no clear guides to treat such patient, he tried his own regime and started on steroid and initial response was quite dramatic but patient relapse on tapering the steroids. Again a bigger dose started and more slowly tapered and this time recovery was stable. Patient was offered alternate treatment for Grave`s disease but he declined rather preferred to simple monitoring. At that time, he was just having subclinical hyperthyroidism. Later he went into complete remission

without any remission. It was interesting strategy used by the gastroenterologist based on his experience with non B and C hepatitis in cholestatic phase, traditionally called steroid wash. It can be helpful for some of other colleagues if they have such case. This rare case of cholestatic hepatitis caused by carbimazole, highlights that although a rare side effect but quite serious can occur unpredictably and a possible therapy that was quite successful, which is important to communicate to other colleagues who can benefit, if confronted with such case and can reduce the morbidity.

P50. Pretibial Myxedema as an Elephantiasic Presentation Following Thyroidectomy for Graves Disease

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Background: Objective: We report the case of 65 years old women diagnosed as Graves disease was treated with thyroidectomy because of failure medical therapy ,after 10 years she developed pretibial myxedema which is usually a late manifestations of Graves disease and is relatively rare . Methods: In this case we present pretibial myxedema as an elephatiasic appearance , non - pruritic, multiple firm , nodules (cobble stone- like appearance) deforming the skin incrased gradually in size around ankles, dorsae,of feet and then to the front of legs just before 10 years with Graves ophthalmopathy . Results: Dermopathy of Graves disease (pretibial myxedema) is un common autoimmune extra thyroidal manifestation of Graves disease, seen in 0.5-4.3% of patients with GD . It is almost always associated with Graves ophthalmopathy . PTM is associated with accumulation of glycosaminoglycans . Dermopathy associated with GD is classified into the four forms , non pitting edema, plaque , nodular ,and elephantiasis form. Elephantiasis pretibial myxedema is a severe manifestation of GD , and refractory to treatment. Conclusions: We report a rare case of elephantiasis pretibial myxedema .Pathogenesis of the disorder is un clear and there is no effective treatment available at present . Management for elephantiasic pretibial myxedema remain a theraputic challenge.

P51. Fistulized Thyroid Abscess Revealing Esophageal Carcinoma in A Young Adult.

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Background: Thyroid abscess is an extremely rare condition. Its diagnosis is often late, which predisposes to serious complications. Methods: We report a case of thyroid abscess occurred in a young adult. The patient presented to the emergency room earlier for a basi-cervical swelling associated with dysphonia, dysphagia and dyspnea. Results: Neck ultrasound showed a collection of left thyroid lobe fusing to the posterior muscle plan. A cervicothoracic computed tomography objectified a fluid collection in the left lobe of the thyroid fistulising in the hyoid muscles beneath and left piriform sinus with thickening of the hypopharynx and upper esophageal sphincter. The puncture brought a purulent fluid. Panendoscopy under general anesthesia revealed the presence of a tumor proliferation of the upper esophageal sphincter. A biopsy with histological examination concluded to a squamous cell carcinoma. Conclusions: This observation indicates that the thyroid abscess may be the mode of discovery of esophageal cancer. Hence the interest to seek an underlying cause in cases of thyroid abscess.

P52. Iodine Status in Patients with Thyroid Diseases

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Background: Iodine deficiency is an important preventable cause of mental retardation and prevention of Iodine deficiency disorders is of paramount importance. Excessive iodine intake is also to be avoided as it might result in iodine induced hyperthyroidism and autoimmune thyroid disease. WHO recommends median urinary iodine as the main indicator to be used to assess the iodine status of a population. According to the WHO and Iodine global network (IGN), the population iodine status in UAE is considered adequate and the median urine iodine concentration (UIC) is reported as 162 mcg/L. However there are no published studies. A study from 2003 had reported a low prevalence of IDD in UAE based on neonatal TSH levels. Our objective was to examine the iodine status among patients with thyroid diseases attending the Endocrine clinic at a single centre in Sharjah, United Arab Emirates (UAE). Methods: Urinary

iodine levels were obtained in patients with thyroid disorders attending the Endocrine centre of Al Zahra Hospital, Sharjah, over an 18-month period from July 2014 to December 2015. A random urine sample was obtained for iodine test and was analyzed at a single referral laboratory. Patients who had recent iodine exposure, those with elevated creatinine and pregnant women were excluded. Thyroid diseases were classified into 3 groups - Euthyroid goiter, Hypothyroid and Hyperthyroid. Demographic variables like age, gender and ethnicity and investigations like thyroid function test and thyroid antibody levels were collected. Urine iodine results were classified as per WHO ICCIDD cutoffs. Data was analyzed using Microsoft Excel and SPSS software. Results: 496 patients with thyroid disease had urinary iodine levels measured in the study period. 84% were women and 16% men. The mean (± SD) age of the sample was 37.6 (± 9.7) years. There were almost 40 different nationalities represented and were grouped into UAE nationals, other Arabs/ White, South Asians, East Asians and others. Majority of the patients had hypothyroidism (64.1%) followed by euthyroid goiter (27%) and hyperthyroidism (8.9%). The median (range) urine iodine concentration (UIC) of the entire sample was 148.6 (1.2-1952) mcg/L and the median urine iodine/ creatinine ratio (UICR) was 174.6 (34-2033) mcg/g. There was no significant difference in the mean iodine levels in men and women. Among different diagnostic groups, the median (range) UIC was 169.1 (28.7-1952) mcg/L in the hyperthyroid group vs 149.5 (14-947) mcg/L in the hypothyroid group and 139.4(1.2-1167) mcg/L in the goiter group. Based on WHO cut-offs, 1.7% of patients had severe iodine deficiency, 11.2% had moderate deficiency and 20.4% had mild iodine deficiency. UIC was optimal in 29.5%, above adequate in 15.7% and excessive in 21.6% of patients. There was no significant difference in the prevalence of deficiency in the three diagnostic groups or by gender. While using the UICR criteria, iodine deficiency was found to be present in 18.3% of the entire sample. There was a significant correlation between random UIC and UICR (r= 0.69, p 0.00). Conclusions: We present the urinary iodine levels in patients with thyroid diseases from an Endocrine center in UAE. The median UIC of our patients was in the optimal range. However, one-third of our patients had some degree of iodine deficiency. Since the majority of patients in our sample are women and of child-bearing age, this finding has potential public health importance. A significant proportion of our patients also had excessive urinary iodine. Further studies may be warranted to assess the factors associated with high or low iodine levels.

P53. The Association Between Hypothyroidism and Type 2 Diabetes Mellitus; A Case-Control Study

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Background: Hypothyroidism is an endocrine disorder which may happen secondary to a thyroid gland disease but may also occur without an identifiable cause and may frequently go undiscovered. An association between hypothyroidism and type 1 Diabetes mellitus (DM) has been reported in the literature. Type 2 DM is highly prevalent in Saudi Arabia and few studies addressed its association with hypothyroidism. This study aims to explore the possible association and the risk factors of developing hypothyroidism in type 2 diabetic patients. Methods: The records of King Abdulaziz University Hospital were searched to locate the files of 120 hypothyroid patients (cases). A similar number of patients registered in the orthopedic clinic were obtained so that they matched the cases in gender and age (controls). For both cases and controls the following data were extracted: demographics, diabetic status and relevant available lab data. After excluding all patients with known cause for hypothyroidism and those with type 1 diabetes, logistic regression was used to examine the association in question while adjusting for confounders. Results: Analysis included 120 cases with hypothyroidism and 120 controls. There were no statistically significant differences between cases and controls with regards to age or gender. The odds ratio (OR) of DM among cases as compared to controls was 6.29 (95% confidence interval-CI: 3.382-11.699) after adjusting for age and gender. The level of HbA1c was significantly higher in cases (7.9 +/- 2.6 versus 6.4 +/- 1.6 in controls).Among diabetics, the presence of complications were significantly higher (P=0.001) in the cases than in controls. Conclusions: There is a significant association between hypothyroidism and type 2 DM, and the poor glycemic control and complicated diabetes may increase the risk of developing hypothyroidism.

P54. Pattern of Thyroid Disease in Hail Region, Saudi Arabia

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Background: Thyroid gland is one of the important organ in human body and the burden of thyroid diseases in the general population is enormous specially in females. In Saudi Arabia its pattern is differ from area to area.

Methods: This is retrospective study included 175 patients with thyroid diseases attended the endocrine outpatient clinic of King Khalid hospital, Saudi Arabia during the year 2013. They were clinically diagnosed as having thyroid disorders. They were represented either by manifestation ofhypothyroidism, hyperthyroidism or enlargement of thyroid gland. The data were collected from the medical admission and outpatients records. The data included sociodemographic data, clinical presentation, causes and risk factors. Results were tabulated and analyzed Results: The patients complaining of different thyroid disorders were 175. 98(56 %) cases was found to have hypothyroidism and 57 (32.6 %) had hyperthyroidism. Iodine deficiency was associated with hypothyroidism in females but it was common in males with hyperthyroidism. The etiology and risk factors of hypothyroidism were stress, malignant tumors, Hashimooto thyroiditis and diabetes in males while they were bad nutrition, Iodine deficiency, goiter, benign thyroid tumor and family history in females. Diabetes, graves, disease, benign and malignant tumors were common in males but bad nutrition, iodine deficiency, goiter andfamily history were the more frequent in fameless suffered from hyperthyroidism .Total cases with goiter were 89 most of them were males (60.7%) palpable goiter was more common 75.5 than visible type . Malignant thyroid were found mainly in males (75%) with papillary type of cancer (64.3%) and the common presenting manifestation was hyperthyroidism (53.6%). Conclusions: Thyroid disorders are common in Hail region specially in females. The pattern is more or less similar to that detected in other Saudi cities. Goiter and malignant thyroid are more common in males.

P55. Hypothyroid Myopathy After Radioiodine Treatment for Graves Disease.

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Background: Without regard to the cause of hypothyroidism, neuromuscular and musculoskeletal manifestations can occur which include weakness, pain, aching and stiffness(1). Hypothyroid myopathy typically manifests as proximal muscle weakness and an increased creatine kinase level(2). We report a case of hypothyroid myopathy which occurred after Radioiodine I-131 (RAI)treatment for Graves Disease. Methods: 20 year male ,case of Graves thyrotoxicosis ,on treatment with Neomercazole at dose of 15mg /day for last 6 months, underwent RAI I131 treatment at a dose of 10mci(400mbq).Subsequent follow up over next 2 months revealed normalization of Free T3 and Free T4 with TSH still slightly suppressed. Patient was lost to follow up and returned after 4 months with history of weight gain of 6 kg. Weakness in lower limbs, easy fatigability were other presenting symptoms. He also had difficulty in getting up from squatting position, climbing stairs, frequent muscular cramps and stiffness. On examination; he had periorbital puffiness; pedal edema. Pulse: 56/min and Blood pressure: 130/80 mm hg. Positive findings from neurological evaluation included bilateral proximal muscle weakness in lower limbs with grade 4 power. There was no muscle hypertrophy. Ankle jerks were delayed. Results: T3 =0.25 ng/ml (0.58-1.59 ng/ml); T4 = 1.7 µg/dl (4.8-12 µg/dl); TSH=250 µIU/ml (0.3-4.9 µIU/ml); Creatine phosphokinase (CPK) =1050 IU/l (N<170 U/l); Serum lactate dehydrogenase (LDH) =235 U/l (N 90-185 U/l); Urine =No myoglobinuria. The patient was started on 100 µg/day of levothyroxine. On a routine follow-up later, there was complete resolution of symptoms and normalization of biochemistry. Conclusions: Hypothyroidism is a very common endocrine disease and clinicians should be aware of such atypical and rare presentation of hypothyroid disease spectrum.

P56. Radiological Management of Adrenal Masses

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Background: Adrenal lesions are commonly encountered in routine clinical practice. A variety of imaging methods are available for evaluating adrenal lesions including ultrasound, computed tomography (CT), magnetic resonance imaging (MRI), and nuclear medicine techniques. Accurate radiological evaluation is essential forformulating appropriate diagnoses and for differentiating benign from malignant neoplasms. The aim of our study is to focus on the role of CT densitometry, CT washout characteristics and MR chemical shift to characterize adrenal masses and imaging features of the most common adrenal lesions. Methods: Retrospective review of 47 patients who haveadrenal masses confirmed histologically or radiologically (adenoma) at the University Hospital of Marrakesh over a 1 year period. Data regarding clinical presentation and imaging findings are collected. Imaging techniques are based on the measurement of CT wash-out and chemical shift imaging on MRI performed with in-phase and out-of-phase gradient-recalled-echo (GRE) sequences. Results: Abdominal CT scan was performed for all patients, ultrasound examination for 21 patients and five had MRI. Our series comprise 6 cases of secreting adenomas, 19 cases of pheochromocytomas, 7 cases of corticosurrenalomas, four cases of adrenal metastasis and one case for each of the followings: neuroblastoma, hemangioma, ganglioneuroma, schwannoma, myelolipoma, adrenal tuberculosis and hematoma. Conclusions: CT scan is the modality of choice based on measurement of the wash-out. Chemical imaging shift is the mainstay of MR evaluation of solid adrenallesions; this technique is used when contrast medium CT scan is contraindicated, for cystic or hemorrhagic lesions. CT scan and MRI are fundamental to characterize adrenal lesions, describe their relationships with adjacent organs and enable the diagnosis of associated neoplasms.

Reviewers
NA (solicited submission)

Editors
Salem A Beshyah, Abu Dhabi, UAE.
Elmahdi Elkhammas, Columbus, Ohio, USA.