

**SUN-047**

**Background:** Granulomatous disease secondary to cosmetic injection of silicone is an uncommon cause of hypercalcemia. Transgender persons with limited access to appropriate surgery commonly use this procedure as an alternative, which can cause serious complications. **Clinical Case:** Forty year old transgender women with a 7-year history of nephrolithiasis treated with lithotripsy, pyelotomy and requiring the installation of a pig tail. She is admitted at the emergency room due to renal failure. Non-contrast CT rules out acute obstruction and lab tests conclude terminal kidney failure so she is started with dialysis and discharged. Two months later she returns with fever, she is diagnosed with central venous catheter-related bloodstream infection associated to the dialysis catheter and is started with antibiotics. Physical exam reveals pigmented, indurated nodular areas in her buttocks, hips and legs. The patient is re-interrogated and admits to have had injections of industrial silicone at the age of 22 in the described nodular areas. Regarding her transition process she had a vaginoplasty at 25 years old and was started with estrogens at that time but abandoned controls thereafter. Laboratory: Calcium 10, 8 (8,6-10,2 mg/dl), P 6 (2,5-4,5 mg/dl), PTH 17 (12-88 pg / ml), 25OHVD 3 (30ng / ml). Abdominal and thorax CT showed multiple pulmonary nodules, hilar, axillar and retroperitoneal adenopathies, hepatosplenomegaly, and subcutaneous granulomas with calcification in the buttocks and lumbar areas. HVB, HVC, VDRL and HIV serologies were negative as were ANA, pANCA and Rheumatoid Factor. Myelogram was normal. Biopsy of the involved skin and axillary lymph nodes revealed foreign body granulomatous reaction. Real Time PCR determination of the CYP27B1 mRNA showed a positive expression of this gene in the lesions confirming increased 1 alpha-hydroxylase activity as the cause of hypercalcemia. Tc-99m MDP scintigraphy showed increased activity in the soft tissue of the hips, buttocks and legs. Currently she maintains dialysis with normal values of calcium and is following regular controls in our gender program. **Conclusion:** Granulomatous disease due to cosmetic injection of silicone is a cause of hypercalcemia that should be suspected in the appropriate context. It is important to educate the transgender community about the possible severe adverse effects of these not authorized procedures.

**Tumor Biology****ENDOCRINE NEOPLASIA CASE REPORTS I*****Insulinoma - a Tricker Diagnosis When Some Pieces Are Missing***

Maria Manuel Silva, Medical doctor.  
Hospital Sao Joao, Porto, Portugal.

**SUN-903**

Insulinoma is a rare pancreatic neuroendocrine tumour that secretes insulin, causing hypoglycemia. Because of the nonspecific symptoms, the diagnosis could constitute a challenge. Early detection is important to prevent serious consequences.

A 31-year old woman was admitted for prolonged fasting test. She had no relevant past medical or surgical history till eight months before, when she had an episode of

generalized tonic-clonic seizure with loss of consciousness. At this time, she was taken to emergency, with identification of a hypoglycaemia of 33 mg/dL. Unfortunately this was undervalued and she was discharged with an appointment on a neurologist. After evaluation, she did an EEG, which was normal, and blood tests that identified a fasting glycemia of 50 mg/dL. By recommendation of her general practitioner, she began to monitor her glycemia during the day, identifying multiple glycemia <50mg/dL – in fasting and post-prandial period. After the first generalized seizure, she had multiple seizures, always associated with hypoglycaemia. During the night she had to wake up every two hours to eat, in order to prevent hypoglycaemia. Moreover, in the last 6 months, she augmented 12 Kg. She also described two episodes of behavioural changes with confusion and speech alteration.

She wasn't under any medication that could be associated with hypoglycemias. Previous records showed she had a fasting glycemia of 50 mg/dL two years ago. When she was admitted to our department, besides she had eat one hour before, she had glycemia <55 mg/dL. Blood tests showed glucose level=22 mg/dL, insulin=39 µU/mL (normal range 2.6-24.9 µU/mL), C-Pep=0.90 ng/mL (normal range 1.1-4.4 ng/mL). Plasma B-hydroxybutyrate was negative. After Glucagon EV, glucose level increase to 53 mg/dL (>25 mg/dL). We also evaluated cortisol and growth hormone that were normal. Abdominal computed tomography scan with contrast demonstrated a well-defined hypervascular lesion involving pancreas tail. Abdominal MRI was also performed showing a hypervascular lesion involving pancreas tail with 11x21mm. Laparoscopic surgery to enucleate the lesion was made. Pathological evaluation revealed a well-differentiated neuroendocrine tumour (positive staining for synaptophysin, cromogranin and insulin) measuring 0.3 cm. The diagnosis of pancreatic insulinoma was confirmed. After surgery, the glucose level increased to the normal range. The patient is currently in 6 months follow-up with a good evolution.

The diagnosis of insulinoma requires high suspicion. In this case, the patient didn't have the typical insidious neurogenic symptoms. There is a need to value neuroglycopenic symptoms associated with hypoglycemia, otherwise serious consequences can occur.

**Bone and Mineral Metabolism****PARATHYROID HORMONE TRANSLATIONAL AND CLINICAL ASPECTS*****Concordant Parathyroid Imaging; Frequency and Predictors of Concordance and Its Impacts on Cure***

AYE AYE KHINE, MB,BS, MRCP<sup>1</sup>,

Sharifah Faradila Wan Muhamad Hatta, MBBCHB MRCP(UK)<sup>2</sup>,

HARIT BUCH, MD<sup>1</sup>, QURATULAIN YOUSUF, MD,MRCP<sup>1</sup>,

SANJAY VYDIANATH, MD<sup>1</sup>, PETER STROUHAL, MD<sup>1</sup>,

ANDREW GARNHAM, MD<sup>1</sup>.

<sup>1</sup>ROYAL WOLVERHAMPTON NHS TRUST,

WOLVERHAMPTON, United Kingdom, <sup>2</sup>Universiti Teknologi

MARA Sungai Buloh, Selangor, Malaysia.

**SAT-394**

Introduction: Accurate pre-operative imaging of a parathyroid adenoma facilitates minimally invasive surgery

for primary hyperparathyroidism, increases cure rate and reduces perioperative complications. The two most commonly deployed preoperative localization studies are ultrasonography (US) and parathyroid scintigraphy using 99m-technetium sestamibi (RN). Patients who have concordant results between the two studies (most studies report concordance rate of 60%) usually undergo minimally invasive surgery whilst those with non-concordance scan results often need bilateral open neck surgery. Objectives: We did a retrospective assessment of the clinical, biochemical and imaging parameters of patients who had parathyroid surgery in our hospital to assess (a) the sensitivity and positive predictive value (PPV) of US and RN scans (b) the frequency of concordance between the two imaging studies (c) the clinical and laboratory predictors of concordance and (d) the impact of concordance on the cure rate. Method: 155 patients who were operated for PHPT between January 2011 and January 2019 were included. All patients underwent preoperative localization with US and RN imaging. The sensitivity and PPV of the 2 imaging procedures in detecting a parathyroid adenoma were determined by correlating the imaging findings of both scans with the composite information obtained from surgical findings and post-operative biochemical results to indicate cure. The patients with concordant and non-concordant imaging findings were compared for surgical cure rate, serum calcium and parathormone level, and the volume and weight of the adenoma. Results: The sensitivity and PPV of US were 80.9% and 82.8% and for RN scan 78.7% and 87.8% respectively. There was no statistically significant difference in the accuracy between the two modalities. 93(60%) patients had concordant and 62(40%) patients had non-concordant scan results, which included true discordance and non-localization by one or both scans. Cure rate in concordant and non-concordant scans were 96.8% and 83.7% respectively ( $p=0.02$ , chi-square). In comparison to patients with non-concordant imaging, patients with concordant imaging had higher level of serum calcium (mean 3.02 vs 2.86,  $p=0.04$ ), the resected adenoma was larger in volume (mean 3109mm<sup>3</sup> vs 2083mm<sup>3</sup>,  $p=0.05$ ) and was heavier (mean 1.59 vs 1.10  $p=ns$ ). However there was no difference in the age or serum PTH level between the 2 groups of patients. Conclusion: Both US and RN imaging have similarly high sensitivity and PPV in identifying a parathyroid adenoma and our figures were comparable to the published literature. When the two studies are concordant a significantly higher surgical success rate is obtained. Patients with higher serum calcium and larger adenomas are more likely to demonstrate concordant imaging.

## Diabetes Mellitus and Glucose Metabolism

### TYPE 1 DIABETES MELLITUS

#### *Liver Function Test in Type 1 Diabetes Mellitus and Prevalence of Other Autoimmune Disease in Type 1 Diabetes Mellitus*

Nadig Anusha, Dr, DM<sup>1</sup>, sree divya, DM<sup>1</sup>, alok sachan, DM<sup>1</sup>, v s suresh, DM<sup>1</sup>, ASHOK VENKATANARASU, DM<sup>2</sup>.

<sup>1</sup>Sri Venkateswara institue of medical science, Tirupati, India,

<sup>2</sup>sri ventakeswara institute of medical science, tirupati, India.

### SAT-668

#### ABSTRACT

Title: Liver function test in type 1 diabetes mellitus and prevalence of other autoimmune disease in type 1 Diabetes Mellitus

#### Background

Recent studies suggest that non-alcoholic fatty liver disease (NAFLD) may be more common in type 1 diabetes. The pathogenesis of NAFLD has been hypothesized that, hepatic fat accumulation may be due to hyperglycemia induced activation of the transcription factors.

Type 1 DM inducing autoimmune process can also affect other organs. So screening for celiac disease, Hashimoto's thyroiditis and other autoimmune disorders is necessary.

#### Aims:

1.

To evaluate the prevalence of NAFLD in type 1 DM. And to correlate glycosylated hemoglobin (HbA1c) with aspartate transaminase (AST) and alanine transaminase (ALT).

2.

To determine the prevalence of autoimmune disease like hypothyroidism, celiac disease, vitamin B12 deficiency and Vitiligo in type 1 DM.

3.

To study the prevalence of microvascular complications and correlate it with HbA1c.

#### Study design

Cross sectional study

#### Methods:

Eighty patients with type 1 DM were taken, liver function test, HbA1c and TSH was sent. BMI was calculated. We calculated prevalence of elevated AST and ALT in all patients and correlated with HbA1c.

All patients were screened for other autoimmune disorders. Screening for celiac disease was done by celiac antibodies and antibodies positive patients underwent duodenal biopsy. Thyroid screening was done by TSH and anti TPO antibodies. Vitamin B12 levels were also measured.

Patients also underwent screening for microvascular complications to see its prevalence.

#### Statistical Analysis

Categorical data was represented in the form of frequencies and proportions. Chi square test was used as test of significance for qualitative data. Continuous data was represented as mean and standard deviation.

Pearson correlation or Spearman's correlation was done to find the correlation between two quantitative variables and qualitative variables and quantitative variables respectively.

#### Results:

Mean age of subjects was 21.38 ± 6.16 years, 57.6% were females and 42.4% were males, mean HbA1c was 10.45 ± 2.54, mean AST was 24.71 ± 15.85 and mean ALT was 22.08 ± 15.13. In the study significant positive correlation was observed between HbA1c and ALT, i.e. With increase in HbA1c there was increase in ALT and vice versa. There was no significant correlation between HbA1c and AST.

In the study 21.2% were hypothyroid, 29.4% had Celiac disease, 1.2% had Vitiligo and 23.5% had B12 deficiency. In the study there was no significant association between Micro vascular complications and HbA1c.

In the study 3.5% had neuropathy, 7% had retinopathy, 4.7% had nephropathy.