

**METHODOLOGY**

This is a multicentre intervention study involving patients with obesity undergoing metabolic surgery in private centres around Klang Valley. Those with a body mass index (BMI) of  $\geq 25$  kg/m<sup>2</sup> were categorized into two groups: non-diabetes mellitus (non-DM) and diabetes mellitus (DM). Body composition components, including skeletal muscle mass (SMM), percentage body fat (PBF) and visceral fat area (VFA), were measured using a bioimpedance analyser (InBody S10). Statistical analysis was conducted using the SPSS software version 29.

**RESULTS**

This study involved 121 patients, most of whom were female (n = 74, 61.2%) and Malay (n = 82, 67.8%). The overall mean age was 39.02 (SD 7.8) years. At baseline, there was no significant difference in mean BMI between the non-DM and DM groups ( $P = 0.203$ ). At six months, significant improvement was observed in weight, BMI, WC, PBF, VFA, and SMM in both groups ( $P < 0.001$ ) compared to baseline. These significant improvements in all parameters were maintained up to month 12 in both groups ( $P < 0.05$ ), except for SMM in patients in the non-DM group ( $P > 0.999$ ). Nevertheless, there is no significant difference in between-group comparison for all parameters throughout the study period ( $P > 0.05$ ).

**CONCLUSION**

Metabolic surgery has significantly improved body composition both in diabetic and non-diabetic individuals at six months, with benefits persisting at 12 months. Continuous monitoring for both groups is crucial for maintaining long-term benefits and optimizing outcomes.

**EP\_A065****AN OBSERVATIONAL ANALYSIS OF INSULINOMA FROM A TERTIARY CARE CENTRE**

<https://doi.org/10.15605/jafes.039.S1.076>

**Abdullah Shamshir Abd Mokti, Khairunnisa Jailani, Zanariah Hussein**

*Endocrine Unit, Medical Department, Hospital Putrajaya, Malaysia*

**INTRODUCTION/BACKGROUND**

Insulinomas are the most common pancreatic neuroendocrine neoplasms. Diagnosis requires the demonstration of inappropriately high insulin and C-peptide levels after a prolonged fast, followed by tumour localization by radiological methods and endoscopic ultrasound with functional scans if suspicious for metastasis. Tumour

removal by surgery or radiofrequency ablation (RFA) remains the mainstay of treatment.

**METHODOLOGY**

Data of patients from 2000 to 2023 diagnosed as functioning pancreatic NET in Hospital Putrajaya, Malaysia, were analysed retrospectively. This study aimed to evaluate the clinical features, preoperative laboratory results, imaging diagnosis, surgical treatments and pathologic findings of insulinomas in this centre.

**RESULTS**

Of 21 patients with functioning pancreatic NET, 19 patients were diagnosed with insulinoma with a male/female ratio of 0.6:1. Malignant insulinomas comprised 16.7% of patients. The median age of onset was 41 years. All patients presented with autonomic symptoms, more than 80% presented with neurological symptoms, and 38% had weight gain. Mean duration of symptoms prior to diagnosis was 2.3 years. All three diagnostic criteria of the functional European Neuroendocrine Tumour Society were met by 89% of patients, while 11% met two of the three criteria. The preoperative detection rates of CT, MRI and EUS were 67%, 40% and 78%, respectively. ASVS was diagnostic in 71% of patients. Regarding treatment modalities, 40% of patients underwent pancreatic enucleation, 40% had partial pancreatectomy and 6% had RFA. The mean tumour size was 2.3 cm. Ki-67 were all less than 20%, with 88% having Ki-67 G1 or were well-differentiated. On further follow-up, 10% of these patients developed other manifestations of MEN-1 syndrome.

**CONCLUSION**

Our observational analysis showed that insulinomas were diagnosed in young to middle-aged patients with female preponderance. Initial presentations were mainly neurological, autonomic and with weight gain. Most also fulfilled the ENET biochemical criteria. The tumours are mostly small in size and have a low proliferative index. Clinical and biochemical manifestations for malignant insulinomas do not significantly differ from benign ones.