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A SINGLE-CENTRE, RETROSPECTIVE STUDY ON THE CLINICAL CHARACTERISTICS OF PATIENT WITH TYPE 3c DIABETES MELLITUS

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INTRODUCTION

Type 3c diabetes (T3cDM) is secondary diabetes due to an exocrine pancreatic disorder. There is little information on the profile of T3cDM locally.

METHODOLOGY

This is a retrospective study on adult diabetic patients with prior pancreatic disease who attended the DM clinic in Sarawak General Hospital from 2018 to 2022. Patients with acute pancreatitis (AP), chronic pancreatitis (CP), distal pancreatectomy (DP), and total pancreatectomy (TP) were included.

RESULT

Forty-four patients (63.6% male) fulfilled the study criteria. The majority were Iban (31.5%), followed by Malay (29.5%). The mean age at DM diagnosis was 39 ± 13.6 years, with a median time to DM after pancreatic disease of 6 months (IQR4-19). Twenty-one patients had AP prior to DM, 10 had CP, seven underwent DP, and six underwent TP. The main aetiologies for AP were alcohol abuse (N=10) and hypertriglyceridaemia (N=8). Regarding CP, 8 cases were due to alcohol abuse. Reasons for pancreatectomy were pancreatic cancer (N=9) and necrotizing pancreatitis (N=4). Only seven patients were diagnosed with DM through screening, and the remaining 37 (84%) were diagnosed during admission for uncontrolled DM (N=24) and DKA (N=13). Patients with T3cDM were leaner (mean weight 62.91 ± 19.10 kg), with low (N=8) or normal BMI (N=19) at diagnosis. Upon DM diagnosis, 34 patients (77.3%) were initiated and remained on insulin after 12 months. The median HbA1c at diagnosis was 9.8% (IQR7.5-13.0%) and was 8.7% (IQR7.0-10.9%) at the 12 month follow-up. Common symptoms of pancreatic exocrine insufficiency (PEI) include abdominal pain (77.3%), weight loss (43.2%) and steatorrhea (22.7%). Only 15 patients (34%) received pancreatic enzyme replacement therapy (PERT). The use of PERT has no significant effect on HbA1c result ($p=0.422$) and insulin dose ($p=0.652$) at 12 months.

CONCLUSION

There is frequently delayed and missed diagnosis of T3cDM locally. T3cDM is associated with high insulin usage, poor glycaemic control, and significant PEI burden.