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PREVALENCE OF SUBCLINICAL CUSHING'S SYNDROME AMONG POORLY CONTROLLED TYPE 2 DIABETES MELLITUS SUBJECTS

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INTRODUCTION

The prevalence of subclinical Cushing's syndrome (SCS) among diabetes mellitus patients varies from 0 to 9.4%. The absence of a single gold standard test to confirm SCS is complicated by the lack of standardization in the diagnostic criteria and cortisol measurements using different assays. This study was performed to determine the prevalence of SCS among overweight patients with poorly controlled type 2 diabetes and hypertension.

METHODOLOGY

A cross-sectional study was performed in the Universiti Kebangsaan Malaysia Medical Centre from June 2019 to June 2020. We examined 169 participants with HbA1c of more than 8%. First-line screening with 1 mg overnight dexamethasone suppression test (ODST) and midnight salivary cortisol (MSC) were performed; if any test was abnormal, a low dose dexamethasone suppression test (LDDST) was then done. The cortisol cut-off value for ODST and LDDST was 50 nmol/L, while 11.3 nmol/L was used for MSC. SCS was confirmed if any two out of the three tests were positive: ODST, MSC and a 24-hour urine total cortisol (24UTC).

RESULTS

Six participants (3.6%) demonstrated abnormal MSC, while seven (4.1%) others had abnormal ODST. From these 13 participants, 11 proceeded with LDDST and ACTH. All 9 participants who performed 24UTC had normal results. Two participants showed autonomous cortisol secretion, with ODST and LDDST serum cortisol levels more than 138 nmol/L and high ACTH. However, with normal MSC and 24UTC results, they did not fulfill the criteria for SCS. Therefore, the prevalence was zero percent.

CONCLUSION

The low prevalence of SCS in this study is consistent with previous studies. Poor glycaemic control among our study population could be due to long duration of diabetes with beta cell decline, poor adherence to diet and medications and lack of intensification of insulin which was not explored.