OP_A002

EXPLORING THE CORTISOL WORMHOLE: A SHORTCUT PREDICTOR FOR SHORT SYNACTHEN TEST OUTCOME IN THE SABAH POPULATION

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INTRODUCTION
The Short Synacthen Test (SST) is a commonly used diagnostic tool for adrenal insufficiency. Recent studies demonstrating a correlation between morning cortisol levels and SST outcomes suggest the utility of establishing cut-off values for morning cortisol levels to maximize the potential for cost reduction.

METHODOLOGY
In this retrospective cross-sectional analysis, we evaluated 620 SSTs conducted in both inpatient and outpatient settings. Baseline morning cortisol levels were drawn prior to Synacthen injection, while cortisol levels at 30- and 60-minutes post-injection of Synacthen were also obtained. All samples underwent analysis using the Abbott Architect Assay.

RESULT
Receiver-operator curve analysis revealed an area under the curve (AUC) of 0.865 (95% CI 0.838-0.892). Our findings indicated that morning cortisol levels above 382.5 nmol/L could predict a passing result on the SST with 100% specificity (86% sensitivity, 100% positive predictive value). Conversely, a level below 81.2 nmol/L exhibited a 100% sensitivity (47% specificity, 100% positive predictive value) in predicting SST failure. Of the participants, 38 (14%) passed the SST using the >382.5 nmol/L cutoff, while 164 (46%) failed using the <81.2 nmol/L cutoff. Notably, our study suggests that approximately 32% of the conducted SSTs (202 tests) may have been unnecessary based on these findings.

CONCLUSION
Our research supports the use of morning cortisol cutoff values to predict SST outcomes. A morning cortisol level below 81.2 nmol/L is indicative of SST failure, while a level above 382.5 nmol/L predicts SST success. Patients falling within the 81.2-382.5 nmol/L range should undergo further assessment with the SST to establish an accurate diagnosis.