ADULT

PP-01

Investigations of Hyperthyroidism – A Systemic Review (Malaysia 2019 Management of Thyroid Disorders Clinical Practice Guideline)

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INTRODUCTION
Hyperthyroidism is a spectrum of disorder with a rather common clinical presentation with different aetiologies. The aetiological diagnosis is important as the management differs. The aim of this review is to outline the algorithm of diagnostic testing for aetiology of hyperthyroidism.

METHODOLOGY
We examined relevant literature using a systematic PubMed search supplemented with additional hand searched articles. Of the 1151 search results, 1080 studies were removed after reviewing titles/abstracts. Finally, after reviewing 62 full texts, 22 articles were relevant to our search topic.

RESULTS
In patients with suspected hyperthyroidism, serum thyroid stimulating hormone (TSH) and free thyroxine (fT4) should be obtained at the initial evaluation. fT3 should be measured if TSH is suppressed and fT4 is within normal range. Thyroid ultrasonography with color flow doppler has reasonable sensitivity and specificity to distinguish between Graves' disease and thyroiditis; and is recommended in situation where scintigraphy is not available or feasible (e.g. pregnancy or lactation). Meanwhile, patients with hyperthyroidism without clinical stigmata of Graves' disease, TSH Receptor Antibody (TRAb) is useful to distinguish between Graves' disease and other causes of hyperthyroidism. Thyroid scintigraphy should be obtained if the clinical presentation suggests a toxic adenoma or toxic multinodular goiter or whenever the diagnosis is in doubt.

CONCLUSION
The aetiology of hyperthyroidism should be determined at diagnosis. If the aetiology is not apparent based on the clinical examination, diagnostic testing should be done which includes TSH receptor antibody, thyroid scintigraphy and thyroid ultrasound with color flow doppler. However, the choice of diagnostic testing depends on the cost, availability, and local expertise.

PP-02

Capillary Blood Glucose Point of Care Testing for Clinic Screening: Beneficial or Wastage

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INTRODUCTION
Glycated haemoglobin (HbA1c) and home blood glucose monitoring are the recommended tools for assessing glycemic control among patients with diabetes. However, health clinics and hospitals are still utilising capillary blood glucose point of care testing (CBG POCT) either as clinic routine screening or for assessment of patients. The accuracy and benefits of this CBG POCT is doubtful and a potential waste.

METHODOLOGY
This study aimed to determine the clinical relevance of CBG POCT in detecting symptomatic hypoglycaemia or hyperglycaemia during clinic visit and its correlation with HbA1c. This was a cross-sectional study conducted for 1 month that included all patients attending diabetes clinic in Hospital Sultan Haji Ahmad Shah Temerloh. All CBG POCT data were collected and corresponding fasting blood sugar (FBS) and HbA1c were retrieved from patient information system.

RESULTS
97 patients (mean age 49.4±16.3 years) were included with mean CBG POCT 11.6±4.5 mmol/L. All CBG were post-prandial glucose. Only 2% (n=2) of patients had hypoglycaemia (CBG<4 mmol/L) and 17.5% (n=17) had markedly elevated CBG (>15 mmol/L). All of these patients were asymptomatic. 90% (n=87) of patients who attended clinic had HbA1c taken. Mean HbA1c was 9.6±2.5% and 50% had HbA1c above 10%. However CBG POCT did not correlate with patient's recent HbA1c.

CONCLUSION
CBG POCT did not reliably reflect glycemic control of patients and was influenced by postprandial variability. Most patients attending clinic already had HbA1c and FBS taken prior to clinic visit. This reflects a wastage in clinical practice. In general, cessation of CBG POCT in government practice would reduce cost of RM540/year (RM0.45 per test). Additionally cessation of CBG POCT would reduce screening time and prevent unnecessary needle stick injury. Capillary blood glucose use in clinic screening is a waste and not justified in both clinical value and cost.