Audit Template

Audit Title: Thames Audit Group regional audit on Secondary Hypertension	
Lead Auditor: Heather Stoddart & Ellen Ridler	**Audit date(s):** November 2024
Please indicate if ~~**Local**~~ **/ Regional /** ~~**National Audit**~~ Please indicate which hospital & location or region **Thames Audit Group; Southern region**	**Report Author:** Name: Ellen Ridler Email: ellen.ridler@nhs.net

Aims of the Audit:
To audit the service and advice that laboratories in the region offer for the investigation of secondary hypertension, including Cushing's, Phaeochromocytoma and primary hyperaldosteronism.

Audit Method and Outcome(s):
The questionnaire was prepared by the lead auditors after review of relevant guidelines and the previous national audit of phaeochromocytoma/paraganglioma (Boot et al, 2022) and approved by the audit committee. It was circulated to members of the Thames Audit Group and the southern region of the Association of Laboratory Medicine. 14 responses were received.

There was variation in the tests recommended, likely due to local availability, but largely this was in line with guidelines. There were variations in reference ranges quoted which were not explained by the assay used. There was variation in advice offered to clinicians with regard to patient preparation including medication and timing / patient position for sampling.

Audit Recommendations / Standards:
<u>Investigation of Cushings</u>

1. Reference ranges and cut offs for all tests requiring measurement of cortisol should take into account the analytical method.

2. Laboratories should give advice regarding the choice of investigations for patient groups where the results of investigations may be misleading.
   This may include pregnant people and patients taking exogenous oestrogens, patients taking anti-epileptic medications and patients with renal insufficiency

3. Where salivary cortisol is offered, cortisone should also be reported.

4. Where the overnight dexamethasone suppression test is offered, it may be helpful to measure dexamethasone in patients where a false positive result is suspected due to the clinical scenario

Investigation of Phaeochromocytoma and Paraganglioma

5. Urine and/or plasma metanephrines should be the recommended first line test in adult patients
   Urine and plasma catecholamines, HVA and VMA are of limited utility in adult patients with suspected PPGL.

6. 3-methoxytyramine should be included in plasma metanephrine profiles.

7. Laboratories should give advice on the potential effect of medications, either as written guidance available to clinicians before requesting, or as part of the report.

8. Samples for plasma metanephrines should ideally be drawn in the supine position (although we acknowledge that this is challenging in the outpatient setting)

9. Reference ranges for plasma metanephrines should be specific for seated and/or supine sampling, whichever is offered by the laboratory.

Investigation of Primary Hyperaldosteronism

10. Aldosterone, renin (either PRA or DRC) and aldosterone / renin ratio (ARR) should be reported for all patients being investigated for possible primary hyperaldosteronism (PHA)

11. Ideally samples for renin & aldosterone should be taken in the morning after the patient has been out of bed for at least 2 hours, after being seated for 5-15 minutes

12. Patients with a positive ARR should proceed for confirmatory testing by saline suppression test or captopril challenge test
    (Except in the setting of hypokalaemia, undetectable plasma renin and plasma aldosterone >550 pmol/L where no further confirmatory testing may be required)

13. Laboratories should give advice on the potential effect of medications, preferably before requesting.

14. Where medications are not withdrawn before sampling, the clinician should be encouraged to inform the laboratory. The report should include interpretative comments that take into account the effect of any disclosed medications

15. Patients with PHA may be normokalaemic; ARR testing may be helpful even in patients with normal serum potassion.

16. Patients should have a diagnosis of primary hyperaldosteronism confirmed before proceeding to adrenal vein sampling (AVS).

17. AVS should only be performed in a specialist centre by an experienced Radiologist.

Please indicate to whom and when audit presented &/or circulated&/or published:
Results were presented at the Thames Audit Group meeting held 12th November 2024. Standards were circulated to members of the Thames Audit Group following the meeting.

Audit recommendations / standards ratified by … and when:
Agreed by the attendees of the Thames Audit Group meeting held 12th November 2024

Date of audit report: 14.11.24
Audit documents for upload to http://www.labmed.org.uk/ *Please include as attachments with this Audit Summary form if authors and the organising committee would like information to be publicly accessible on the LabMed website Audit section.* TAG Hypertension Questionnaire Octo TAG audit presentation - secor Standards from Secondary Hyperten