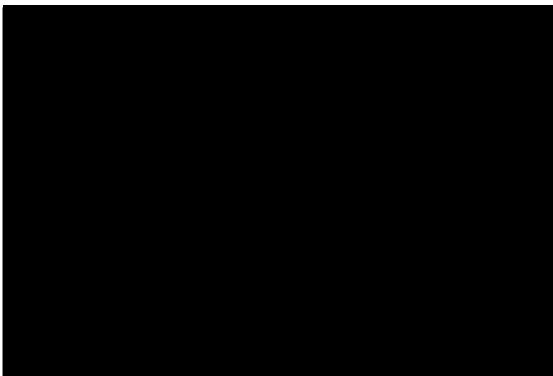


29 August 2019



Re: Official Information Act request – Protocol for diagnosing primary Aldosteronism

I refer to your Official Information Act request dated 15 August 2019 requesting the following information

I am writing to request the ADHB protocol for diagnosing primary Aldosteronism. I also ask for a copy of the interpretation of the results of the test as well.

Primary aldosteronism (PA) is suspected in patients with hypertension resistant to usual anti-hypertensive drugs, especially those < 40 yrs or with hypokalaemia. Screening is by measurement of the serum aldosterone / renin ratio and confirmation by a test of aldosterone autonomy.

We use the attached saline infusion test (SIT) wherein 2 litres of normal saline is infused over 4 hours. While a non-suppressible result is a serum aldosterone value > 200 pmol/l in our laboratory, it is recognised that there is a grey area around this number and values > 180 pmol/l represent partial autonomy. The lower the value < 180 pmol/l, the less likely PA is present.

Persons with adrenal autonomy are then usually advised to have an adrenal CT scan. Depending on the result and individualised discussion with an endocrinologist, consideration is given to medical treatment versus further investigation by bilateral adrenal vein sampling to assess lateralisation with a view to adrenal surgery.

I trust this information answers your questions.

You are entitled to seek a review of the response by the Ombudsman under section 28(3) of the Official Information Act. Information about how to make a complaint is available at www.ombudsman.parliament.nz or freephone 0800 802 602.

Please note that this response, or an edited version of this response, may be published on the Auckland DHB website.

Yours faithfully



Ailsa Claire, OBE
Chief Executive

Saline Infusion Test For Aldosteronism

Overview

| | |
|-----------------------------------|----------------------------------|
| Document Type | Guideline |
| Function | Clinical Service Delivery |
| Healthcare Service Group (HSG) | Adult Health |
| Department(s) affected | Endocrinology |
| Patients affected (if applicable) | Adult endocrinology patients |
| Staff members affected | ADHB clinicians in endocrinology |
| Key words | n/a |
| Author – role only | Endocrine Nurse Specialist |
| Owner (see ownership structure) | Clinical Director, Endocrinology |
| Edited by | Clinical Policy Advisor |
| Date first published | October 2001 |
| Date this version published | November 2015 |
| Review frequency | 3 yearly |
| Unique Identifier | PP2006/RBP/023 |

Objective

- To assess autonomous aldosterone production i.e. adenoma or hyperplasia
- Confirmatory random aldosterone/renin ratio

Continued on next page

| | | | |
|-----------------|---|----------------|---------------------------------|
| Section: | Clinical Procedures / RBP | Issued by: | Endocrine Nurse Specialist |
| File: | SalineInfTestAldosteronism2015-11-09.docx | Authorised by: | Clinical Director Endocrinology |
| Classification: | PP2006RBP/023 | Date Issued: | Reviewed November 2015 |

Saline Infusion Test For Aldosteronism

Overview, Continued

Associated Documents

The table below indicates other documents associated with this guideline.

| Type | Document Titles |
|--------------------------------------|---|
| ADHB Policies and Guidelines Library | <ul style="list-style-type: none"> • Hand Hygiene Infection Control • Infection Prevention & Control • Informed Consent • Intravenous Catheters - Peripheral • Medications - Administration • Standard Precautions - Infection Control • Tikanga Best Practice |
| References | <ul style="list-style-type: none"> • Endocrine & Metabolic Testing Manual Third Edition 1998: 1-17 • Holland Hypertension 1984, 6:717 • Journal of Hypertension 2007,25:1433-1442 Saline Infusion Test performance in the PA prevalence in hypertensives (PAPY) study: |

| | | | |
|-----------------|---|----------------|---------------------------------|
| Section: | Clinical Procedures / RBP | Issued by: | Endocrine Nurse Specialist |
| File: | SalineInfTestAldosteronism2015-11-09.docx | Authorised by: | Clinical Director Endocrinology |
| Classification: | PP2006RBP/023 | Date Issued: | Reviewed November 2015 |

Saline Infusion Test For Aldosteronism

Saline Infusion Test for Aldosteronism - Process

| Stage | Description |
|--------------------------|---|
| Indication | <ul style="list-style-type: none"> • Raised aldosterone/renin ratio with plasma aldosterone > 400 nmol/L |
| Contra-indication | <ul style="list-style-type: none"> • Patients with congestive heart failure or inability to tolerate high volume fluid infusions. Hypokalaemia should be pre treated |
| Preparation | <ul style="list-style-type: none"> • Patient must be off for 4 - 6 weeks: <ul style="list-style-type: none"> • Amiloride, Spironolactone <i>Spirotone</i> Amizide, Moduretic, Frumil, Aldactone, check with endocrine consultant regarding possible changes in medication pre testing • Maintain potassium supplement medication • Bring all medications |
| Equipment | <ul style="list-style-type: none"> • IV equipment • 4 x 500 ml bags of 0.9% NaCl • Blood tubes clearly labelled • Sphygmomanometer, stethoscope & BP chart |
| Procedure | <ol style="list-style-type: none"> 1. Check and document regular patient anti-hypertensive medication has been taken; <ul style="list-style-type: none"> • Beta-blockers, diuretics, ACE inhibitors, ARBs, calcium channel blockers and NSAID 2. Insert IV line, withdraw basal bloods and send sample for an urgent serum potassium level; 3. Commence infusion (500 mls 0.9% NaCl/hour for 4 hours = 2L); 4. Take BP hourly; 5. Continue normal saline infusion 500 ml/hr over 4 hours; 6. Encourage the patient to pass urine prior to lying down for the last hour of infusion; 7. For the final hour of infusion the patient must be supine. The final blood sample can be taken earlier while supine if the patient needs to get up to the toilet before finishing the infusion i.e. up to 3½hrs; 8. Record hourly BP, assess patient's breathing and report acute breathlessness/chest tightness; 9. Plus 4 hour blood sample (allow 5ml waste). <p>Test now complete. If BP > 200/120 consider oral diuretic.</p> |

Continued on next page

| | | | |
|-----------------|---|----------------|---------------------------------|
| Section: | Clinical Procedures / RBP | Issued by: | Endocrine Nurse Specialist |
| File: | SalineInfTestAldosteronism2015-11-09.docx | Authorised by: | Clinical Director Endocrinology |
| Classification: | PP2006RBP/023 | Date Issued: | Reviewed November 2015 |

Saline Infusion Test For Aldosteronism

Saline Infusion Test for Aldosteronism - Process, Continued

| Stage | Description |
|-----------------------|---|
| Samples | <ul style="list-style-type: none"> • Basal – sodium, potassium, creatinine, Aldosterone, Renin • + 4 hours – Aldosterone only • NB Aldosterones need to be in to the laboratory within 2 hours |
| Interpretation | <ul style="list-style-type: none"> • Aldosterone/renin ratio > 40 = consistent with hyperaldosteronism = screening test only • The suppression test for autonomous aldosterone production: <ul style="list-style-type: none"> • Normal subjects - plasma aldosterone < 200 pmol/L • Hyperaldosteronism - plasma aldosterone > 200 pmol/L <p>Failure to suppress also occurs in a proportion of patients with hypertension and reduced Glomerular filtration rate.</p> |

| | |
|---|--|
| Section: Clinical Procedures / RBP | Issued by: Endocrine Nurse Specialist |
| File: SalineInfTestAldosteronism2015-11-09.docx | Authorised by: Clinical Director Endocrinology |
| Classification: PP2006RBP/023 | Date Issued: Reviewed November 2015 |