

## NEONATAL MEDICATION PROTOCOLS

TETRACOSACTRIN (SYNACTHEN®)

Created by: NCCU

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NCCU Clinical Guidelines

KEMH/PMH

Perth, Western Australia

<b>DRUG:</b>	<b>TETRACOSACTRIN (SYNACTHEN®)</b>
<b>PRESENTATION:</b>	Ampoule: 250 microgram/mL
<b>ACTION &amp; INDICATION:</b>	ACTH is the primary regulator of glucocorticoid production in the adrenal glands. Tetracosactrin (Synacthen®) is a synthetic form of ACTH and used to assess the stimulated cortisol response of the adrenal cortex.  It is used in a screening test for suspected primary adrenal insufficiency in non-critically ill patients. It is also used for diagnosing <b>CIRCI</b> (Critical Illness Related Corticosteroid Insufficiency).
<b>DOSE:</b>	<u>Routine Dose:</u> <b>12 microgram/kg tetracosactrin intramuscularly (IMI)</b> (After baseline bloods).  <u>Low Dose (only use if investigating for CIRCI in acutely ill neonate):</u> <b>1 microgram tetracosactrin intravenously (IV).</b> (After baseline bloods).
<b>ADMINISTRATION:</b>	IMI or IV as described above
<b>ADVERSE EFFECTS:</b>	Hypersensitivity or anaphylaxis, rare. Full resuscitation facilities must be available and the patient on a cardio-respiratory monitor for the duration of the test.
<b>SHORT SYNACTHEN TEST:</b>	For use in the neonatal units at Princess Margaret and King Edward Memorial Hospitals  Blood tests: 0.6 mL in heparinised tube (green top)  1. Baseline plasma cortisol 2. Dose of Synacthen® 3. Plasma cortisol 30 minutes post dose. 4. Plasma cortisol 60 minutes post dose.  Time of collection and time point of test must be clearly marked on the tubes. If ACTH requested by Endocrinology at baseline,  1mL in EDTA tube on ice must be sent to Biochemistry as soon as possible. Current steroid therapy may interfere with the assay, and the test should only be done at least 72 hours after the last dose of maternal or neonatal steroids.
<b>REFERENCES:</b>	<ul style="list-style-type: none"> <li>• Diagnostics of Endocrine Function in Children and Adolescents (2003). MB Ranke (ed), 3rd edition, Karger.</li> <li>• Garcia et al. <a href="#">Adrenal insufficiency in hemodynamically unstable neonates after open-heart surgery</a>. Congenit Heart Dis. 2010 Sep-Oct; 5(5):422-9.</li> <li>• Paediatric Pharmacopoeia 13th ed. RCH Melbourne</li> </ul>
<b>DATE:</b>	Sept 2014