Cosyntropin (Cortrosyn®) Stimulation Test

Rationale:

Cosyntropin (Cortrosyn®) is a synthetic analog of Adrenocorticotropic Hormone (ACTH) with similar biologic activity. The intramuscular (I. M.) or intravenous (I.V.) injection of cosyntropin causes the stimulation of cortisol release, peaking at 30 to 60 minutes post dose. This test is primarily used in assessing adrenal insufficiency.

Patient Preparation:

Ideally, this test should be performed at 0900 or 2000, but may be performed at any time. The patient should be quietly sitting or in bed during the simulation test.

Materials:

1. Plain, red-top tube or red-gel blood collection tube
2. Cosyntropin (Cortrosyn®), prepared according to the pharmaceutical manufacturer's instructions. Dose may require reconstitution with isotonic sodium chloride for injection.

Procedure:

1. Collect one tube of blood by venipuncture immediately prior to dose. In the labeling of the tube, include it's designation as the "baseline".
2. Give the dose of Cosyntropin (Cortrosyn®) I.M., 0.25-0.75 mg for adults and children over 2 years of age. Give 0.125 mg to children under 2 years of age. Please note that the minimum dose of 0.25 mg often yields the maximum response.
3. At 30 minutes post dose, collect a second sample and label as the 30 minute tube.
4. At 60 minutes post dose, collect a third sample and label as the 60 minute tube.
5. Send labeled specimens and request slips to the laboratory promptly.

Reference Interval:

Normal: cortisol 3.0 mcg/dL
Cushing's Syndrome: cortisol >10 mcg/dL

References:

1. Tietz Textbook of Clinical Chemistry, 2nd edition, C. A. Burtis and E.R. Ashwood, eds, W.B. Saunders Company, publ., Philadelphia, PA, 1994, pg. 1840
2. Wallach, Jacques, Interpretation of Diagnostic Tests, 7th edition, Lippincott Williams and Wilkins, Philadelphia, PA, 2000, pg. 634