Acromegaly Glucose Tolerance Test

**Indication:**
Used as a diagnostic tool and to monitor growth hormone levels in Acromegalic patients.

**Contraindications:**
None

**Precautions:**
If patient is on insulin this should be omitted.

**Procedure:**
- **Preparation:**
  - Unrestricted carbohydrate diet for 3 days prior to the test.
  - **Fast from 22:00 hours the previous night.** (fast > 10 hours).
  - Water allowed.
  - Morning medication is omitted and taken when test completed.
- Patients attend unit at 08.30. Explain procedure.
- Butterfly or IV cannula used for sample collection.
- 394 ml Lucozade from standard bottle (73kcal/100ml).
- (Patients who are unable to tolerate glucose are given Polycal 120 ml as an alternative - this should be noted in case notes.)
- Patient should be seated throughout test. No smoking allowed. If any glucose is lost by vomiting, test must be discontinued.
- Breakfast is given when test has been completed and patient is reminded to take medication if applicable

**Sampling:**
- Give lab prior warning of test
- Growth hormone, IGF-1, glucose, and baseline bloods as requested at 0.
- Give glucose drink
- Growth hormone and Glucose at +30 +60 +90 +120
- Tubes: Growth hormone 2.7ml Li hep (orange) tube. Glucose yellow tube.
- Samples including baseline bloods are sent to lab on completion of test with WGH combined lab form. See sample form attached.

**Interpretation:**
Growth hormone should suppress to < 2.0 in normal people. In acromegaly failure of suppression occurs, and there may be a paradoxical rise in GH in response to the glucose challenge.

In treated acromegaly, GH < 2.0 is indicative of cure; GH< 5.0 is indicative of satisfactory biochemical control.