GLUCOSE TOLERANCE TEST FOR DIAGNOSIS OF DIABETES

INDICATION: Primarily used for the diagnosis of gestational diabetes or for cystic fibrosis related diabetes. Use of the OGTT to diagnose diabetes outside of these situations is not normally required if fasting venous plasma glucose > 7.0 mmol/L or random venous plasma glucose > 11.1 mmol/L on two occasions. However, if there is disparity between fasting plasma glucose and HbA1c levels, or if diagnosis is borderline, the OGTT may provide additional information.

PRECAUTIONS: This test should ideally not be performed in patients using short-term steroid therapy or during intercurrent illness or physiological stress. The patients should have been on a diet containing an adequate amount of carbohydrate (at least 150g per day) for at least three days prior to the test.

The test should not be performed in patients with periodic hypokalaemic paralysis.

PROCEDURE: The patient should be instructed to arrive at 08.30 hours having fasted from midnight the previous night (8-14h fast). They are allowed to consume water but no other fluid or solids.

A baseline blood sample is withdrawn into a fluoride tube for glucose.

A 75 g glucose load is then provided in the form of PolyCal (113mL plus 150mL water), which should be drunk over the course of 5 minutes. The patient should be instructed to rest for two hours and a repeat blood sample is taken in a fluoride oxalate tube for blood glucose.

At the end of the test the patient is offered a drink and a snack and is free to leave.

SIDE EFFECTS: The patient should be cautioned about feeling nauseous after having a glucose load. Should vomiting occur the test is abandoned and will need to be rescheduled.

INTERPRETATION: Based on the WHO criteria for the diagnosis of diabetes

Plasma Glucose (mmol/l)	**Fasting**		**2 hrs after glucose load**
Diabetes mellitus	≥7.0	or	≥11.1
Impaired glucose tolerance	<7.0	and	≥7.8 and <11.0
Impaired fasting glucose	≥6.1 and <7.0	and	<7.8
Normal	<6.1	and	<7.8
Gestational Diabetes	>5.5	Or	≥7.8

Authors: Endocrine MDT meeting, 14 July 2017

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