

### Definition – Use Whipple's triad

Plasma glucose  
<2.6mmol/L

Neuroglycopenic  
symptoms

Relief by Rx with  
glucose

Note: many people  
can have a low  
glucose level  
without symptoms

### Symptoms/Clinical Signs

#### Acute Hypoglycaemia:

- Hunger, lethargy, blurred vision, sweating, tachycardia, tremor

#### Chronic hypoglycaemia:

- Memory loss, change in personality

Key features of insulinoma's and fasting hypoglycaemia are:

- Eating alleviates symptoms
- Do not occur after meals
- Weight gain due to excessive eating
- Hypoglycaemia at night so not refreshed

### Differential Diagnosis

#### **Reactive hypoglycaemia**

- Drug induced (insulin, oral hypoglycaemics, alcohol)
- Post-prandial (idiopathic, post bariatric surgery)

#### **Fasting Hypoglycaemia**

- Insulinoma
- Organ failure
- Sepsis
- Starvation
- Inborn errors of metabolism (contact duty biochemist to discuss)
- Endocrine (pituitary failure/hypoadrenalism)

### Initial investigations

**Investigations are usually not required if taking hypoglycaemic agents but a review of the dosing of such medications would be needed**

#### **Spontaneous hypoglycaemia**

Send a grey (fluoride) to the lab – DO NOT use POCT solely as a basis to treat

Also send: FBC, U&E, LFT, Calcium, TFT, 9am cortisol to further investigate

#### **Provoked hypoglycaemia**

If a hypoglycaemia episode is never witnessed – a referral to endocrinology to further investigate will be necessary which may use an overnight fast, prolonged fast or mixed meal test depending on the clinical details

#### **Further tests if hypoglycaemia is witnessed**

- Urgently send a glucose (fluoride) sample paired with a serum sample sent on water ice for insulin/c-peptide to the lab
- If the fluoride sample confirms a glucose <2.6mmol/L then the insulin/c-peptide will be sent ( a sulphonylurea screen can be done on the same sample )
- These tests are **not to be sent from primary care**

### **References**

- Evaluation and Management of Adult Hypoglycaemia Disorders. An Endocrine Society Clinical Practice Guideline 2009
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