

A rare case of recurrent hypoglycaemia in the postnatal period

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Objective

To present the differential diagnosis and investigation of hypoglycaemia in the postnatal period and diagnostic criteria and management for a patient with an insulinoma.

Background

A 37-year-old multiparous patient had a straightforward pregnancy and a spontaneous vaginal delivery at term. She attended her GP for her routine six-week postnatal check and reported having difficulty concentrating and feeling disorientated. She was exclusively breastfeeding. Blood investigations arranged by her GP revealed a low glucose of 1.6 mmol/L. She was advised to eat regular meals and her blood glucose was repeated and remained low at 2.5 mmol/L with a low HbA1c of 22 mmol/mol. FBC, U&Es, CRP, TFTs, B12 and folate levels were normal. She was referred to Endocrinology.

Case Report

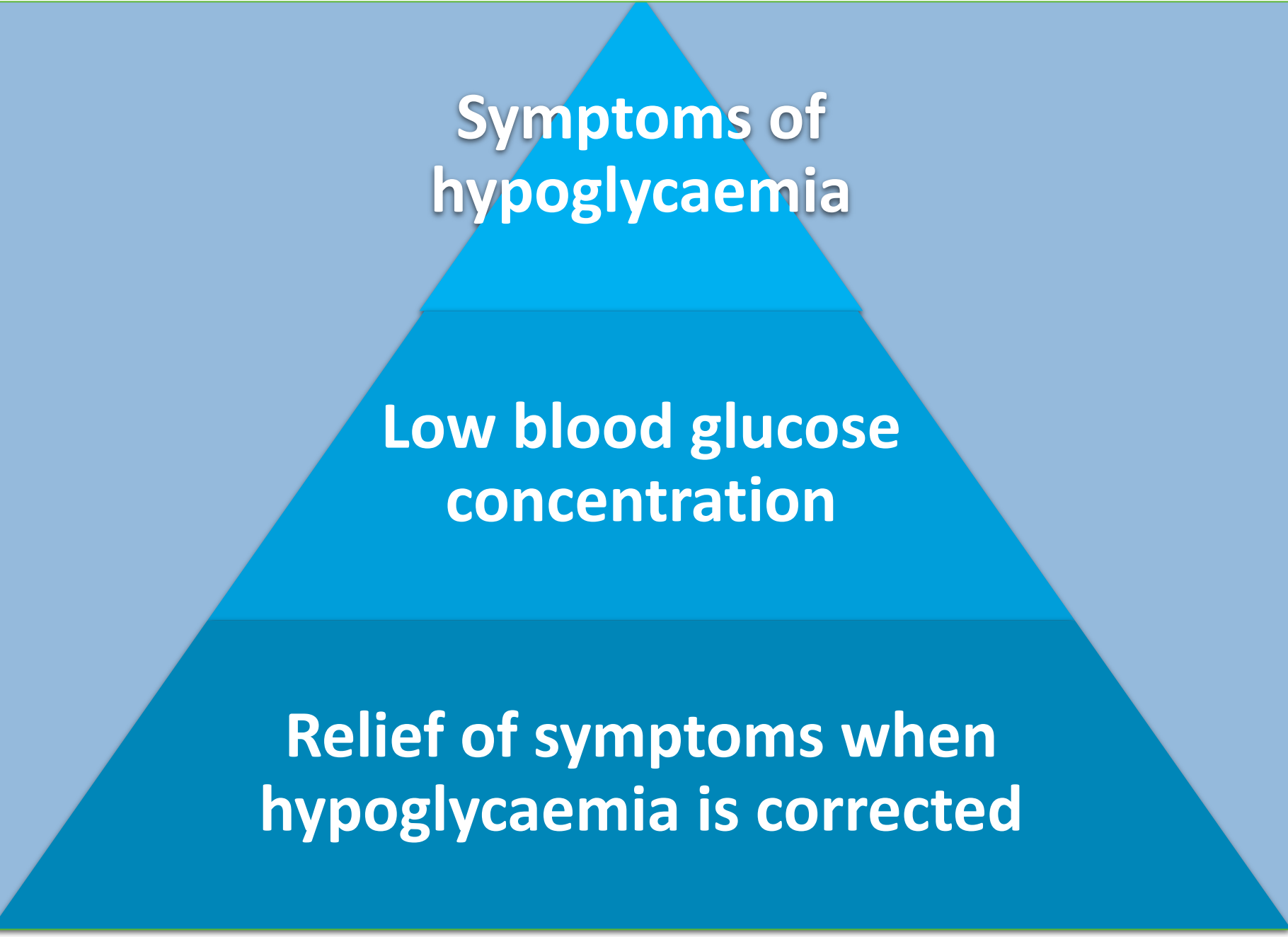


Figure 1: Whipple's Triad

Further investigations were arranged by Endocrinology. Coeliac serology was negative as well as a Short Synacthen Test. The patient gave a good history of episodes fulfilling Whipple's Triad; symptoms of hypoglycaemia, low blood glucose concentration and relief of symptoms when hypoglycaemia is corrected.

Case Report cont.

The next step for investigation would normally be a 72 hour fast but this plan was altered due to the patient's breastfeeding status and Covid-19 pandemic restrictions. She was brought to the Medical Day Unit in a fasted state and continued to fast and breastfeed whilst her blood glucose levels were monitored. After 13 hours of fasting her blood glucose was 1.9 mmol/L. Further blood investigations were obtained and revealed inappropriately elevated C-peptide levels (384 pmol/l) and insulin levels (35 pmol/l) in the presence of fasting hypoglycaemia. Initial management was considered in the context of her breastfeeding. She was offered octreotide, a somatostatin analogue, although it was discussed that its excretion into breast milk had not been studied. An alternative option of stopping breastfeeding in the first instance was also explored and ultimately this is what the patient opted to do. An urgent MRI pancreas was arranged, and this demonstrated a 13mm lesion within the head of the pancreas with features in keeping with an insulinoma.

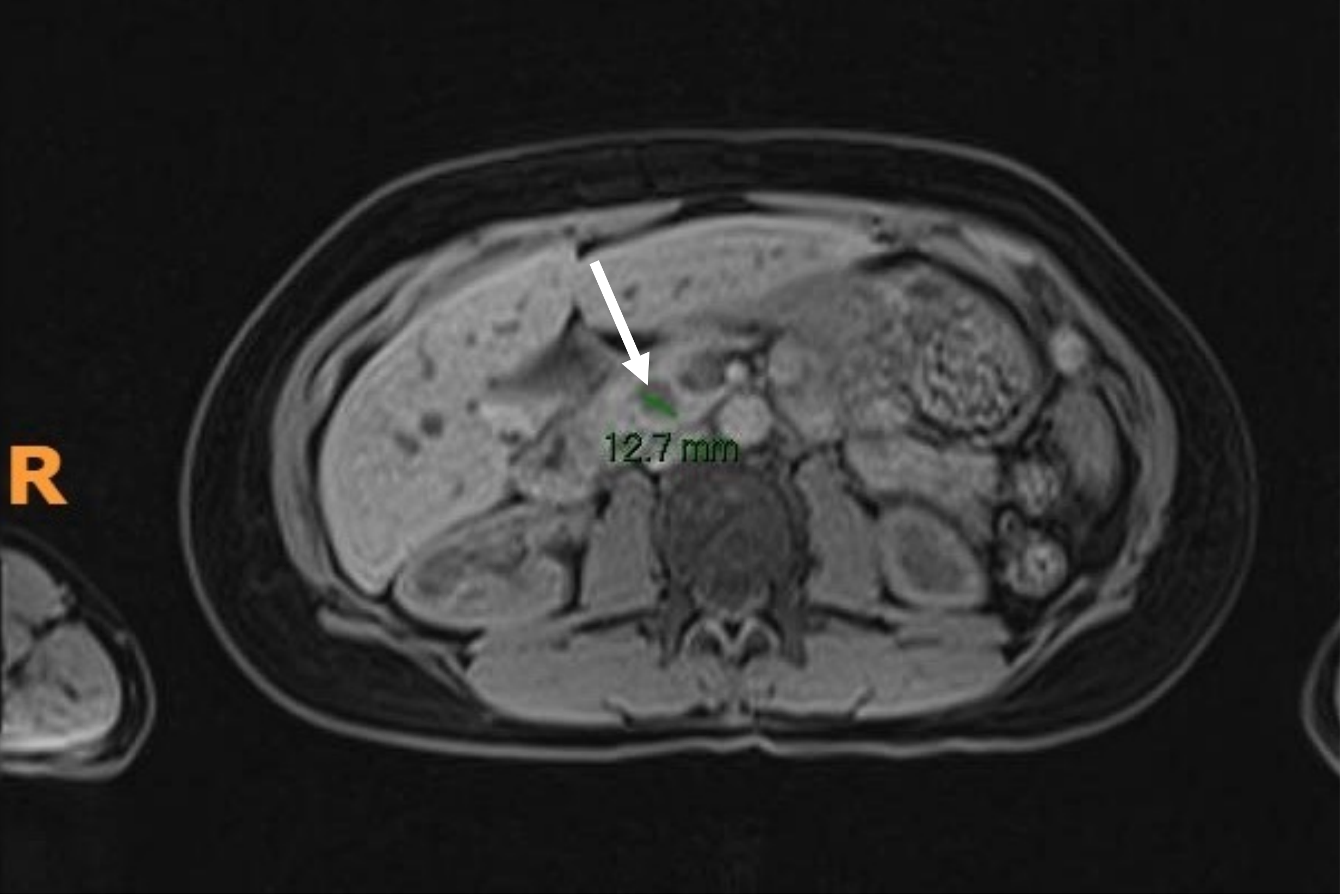


**Figure 2:
MRI Pancreas**

DIFFERENTIAL DIAGNOSIS OF HYPOGLYCAEMIA

Drug induced	Growth hormone deficiency
Immune mediated	Malabsorption
Adrenal insufficiency	Endogenous hyperinsulinism

Management

She was subsequently referred to the Pancreatic MDT and due to the central location of the lesion, the only option for surgical resection was a pancreaticoduodenectomy. Although her symptoms were relatively well controlled once she had stopped breastfeeding, she was still finding it tricky to manage her hypoglycaemic episodes with two small children. Following careful counselling she underwent a pancreaticoduodenectomy (Classic Whipple) at around one year postnatal. Pathology confirmed a well differentiated pancreatic neuroendocrine tumour with complete resection at all surgical margins.

Discussion

Insulinomas are rare neuroendocrine tumours which secrete insulin and symptoms can be unmasked both during pregnancy and in the post-partum period. In this patient her symptomatic hypoglycaemia was likely exacerbated by breastfeeding and her symptoms improved once she stopped. Hypoglycaemia has a wide differential diagnosis and early referral to an Endocrinologist ensured she received timely investigations with consideration of management options and the impact of breastfeeding. Less than 50 cases of insulinoma have been described in the pregnant or post-partum patient but it is nevertheless an important differential diagnosis for clinicians to consider.