Hyperinsulinaemic Hypoglycaemia, a Case Report

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Case Presentation

A 6 year and 8 month old boy was seen for the first time in the hospital at 10 months ago with history of loss of consciousness and cyanosis over the previous 6 weeks. He was brought to the emergency room during an episode. Blood glucose at that time was 2.07mmol/L and ketones were negative. He had gross motor delay.

Investigations

A hypoglycaemia screen when the blood glucose was 1.7 mmol/L showed insulin 1.4mIU/ml. Ketones were negative, GH was 1.42mIU/ml, metabolic screening and tandem mass screen was normal. MRI Brain showed dysgenesis of the corpus callosum. The patient was discharged from the hospital on Polycose after the family were educated about hypoglycaemia symptoms.

Glucagon test demonstrated low growth hormone response and normal cortisol response, and the hypoglycemia was diagnosed to be secondary to growth hormone deficiency. He was started on growth hormone therapy (0.03mg/kg/day). The patient continued on Polycose but still continued to have infrequent attacks of hypoglycemia during prolonged fasting and sick days.

The growth hormone stimulation test was repeated at age of 2 years, and another critical sample was taken which showed high level of insulin (6.32mIU/ml). Because the insulin level was inappropriately high in two occasions, a diagnosis of hyperinsulinism was made and patient was started on diazoxide and growth hormone therapy. He has had no further hypoglycaemic events and is thriving. Underlying genetic cause for hyperinsulinism is awaited.