Adult E-Poster

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HIDDEN IN PLAIN SIGHT: MULTIFOCAL PARAGANGLIOMA IN AN ADOLESCENT WITH HYPERTENSION

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INTRODUCTION/BACKGROUND

Pheochromocytomas and paragangliomas (PPGLs) are rare neuroendocrine tumors. The high incidence of multifocality, recurrence and metastatic disease complicates the management of paraganglioma in adolescents.

CASE

A previously healthy 14-year-old male presented with a one-month history of occipital headache associated with blurring of vision. He had no chest pain, dyspnoea, diaphoresis or syncope. There is no family history of hypertension in the young. His mother has hyperthyroidism.

On arrival, his blood pressure was 242/167 mm Hg, heart rate was 127 bpm, and SpO_2 was 100% on room air. His capillary blood glucose was normal at 4.8 mmol/L. Physical examination showed no signs of goitre, cushingoid features, or acromegalic traits. The patient is overweight, with a BMI of 25.6 kg/m². He showed no stigmata of neurofibromatosis. Fundoscopy showed bilateral optic disc swelling and macular edema, consistent with grade IV hypertensive retinopathy.

Electrocardiogram revealed sinus tachycardia with T-wave inversion in lead V2-V6. Laboratory investigations, including complete blood count, calcium and renal profile, were unremarkable. His endocrine workup confirmed a diagnosis of pheochromocytoma with elevated 24-hour urinary normetanephrine (90.75 umol/day, 36.5x ULN) and 3-methoxytyramine (4.02 umol/day, 2.8x ULN).

Adrenal CT imaging revealed a large, lobulated, heterogeneously enhancing mass measuring 5.0 × 6.1 × 5.4 cm (AP × W × CC) along the left margin of the abdominal aorta. The bilateral adrenal glands are normal.

Neck and Thorax CT showed a well-defined, round, homogeneously enhancing lesion at the base of the skull measuring 1.0 × 1.1 × 1.4 cm (AP × W × CC). Therefore, he was diagnosed with paraganglioma.

His blood pressure is currently controlled with three antihypertensive medications, including an alpha blocker. Given his multifocal disease, germline genetic testing is warranted, and functional imaging should be considered preoperatively to exclude metastasis. He was referred to an endocrine center for further management.

CONCLUSION

Pediatric PPGLs are more often extra-adrenal, multifocal/metastatic, and recurrent, likely due to a stronger genetic predisposition. Hence, timely diagnosis is crucial to prevent morbidity and mortality.

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INSULIN AUTOIMMUNE SYNDROME OR INSULINOMA? UNRAVELLING THE CAUSE OF HYPERINSULINEMIC HYPOGLYCEMIA IN A PATIENT WITH A PANCREATIC CYST

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INTRODUCTION/BACKGROUND

Insulin Autoimmune Syndrome (IAS) constitutes a rare aetiology of non-diabetic endogenous hyperinsulinemic hypoglycaemia, with a prevalence of 4.9–11.7%. We report a case of a 61-year-old Chinese female who was confirmed to have endogenous hyperinsulinemic hypoglycaemia. Subsequent imaging revealed a cystic pancreatic lesion, while insulin autoimmune antibodies (IAA) were mildly elevated. This case highlights the challenge of distinguishing between insulinoma and IAS.

CASE

A 61-year-old Chinese female, with no prior diabetes, presented in April 2024 with symptoms suggestive of Whipple's triad. She experienced both fasting and postprandial hypoglycemia (2.0–3.0 mmol/L) and postprandial hyperglycemia (up to 16 mmol/L). She had no significant drug history except recent glucosamine use two weeks prior. A 72-hour fasting test confirmed endogenous hyperinsulinemia with elevated insulin (245 U/mL) and C-peptide (13.3 ng/mL) at a plasma glucose of 2.6 mmol/L, with a molar insulin-to-C-peptide ratio of 0.4. Sulfonylurea screening was negative, but IAA was mildly elevated at 17.9 U/mL (<2.4).

Pancreatic CT scan revealed a 9 mm non-enhancing hypodense lesion in the pancreatic body, and endoscopic evaluation found a 7 x 5 mm pancreatic cyst. Ga68 DOTATATE