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A CASE OF A RENIN-SECRETING TUMOUR IN AN ADOLESCENT: A RARE YET CURABLE CAUSE OF HYPERTENSION

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INTRODUCTION

Reninomas are benign tumours of the juxtaglomerular apparatus that autonomously secrete renin. Only 100 cases have been reported in the literature. Adolescents with reninomas typically present with refractory hypertension that requires treatment with multiple anti-hypertensives. However, hypertension secondary to reninomas are curable with surgery. Another, minimally invasive procedure, known as cryoablation has been successfully used to cure hypertension in an adult with reninoma, but this has not been reported in an adolescent.

CASE

We conducted a retrospective chart review of the pertinent clinical, biochemical, radiological and histopathological details. We report on a 14-year-old male with a hypertensive emergency; blood pressure 180/100 mmHg and Bell's palsy. His initial investigations showed hypokalaemia 2.2 mmol/L, metabolic alkalosis, raised plasma renin activity 2235 mU/L and aldosterone 8056 pmol/L, suggesting a high-renin mineralocorticoid excess syndrome. A right-sided renal cortical cyst was seen on abdominal computed tomography, measuring 0.9 x 1.6 cm. In order to accurately establish lateralisation of the autonomous renin secretion, renal vein sampling (RVS) was conducted to determine renin ratios, which confirmed lateralisation to the right renal vein (ratio 2.72). His hypertension was difficult to control despite amlodipine, prazosin and verapamil and captopril. There were no complications. Following adequate optimisation of his hypertension, he underwent cryoablation of the lesion. The histopathology was conclusive for a juxtaglomerular tumour. One week post ablation, he had resolution of his hypertension and normalisation of the plasma renin activity to 13.4 mU/L after 1 month.

CONCLUSION

Reninoma, though rare, should be considered in adolescents who present with a triad of refractory hypertension, hypokalaemia, and metabolic alkalosis. It is a curable with surgery, but cryoablation should be given due consideration. This case report illustrates that cryoablation can be used successfully for the management of reninoma in adolescents.

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A CASE OF RECURRENT CRANIOPHARYNGIOMA POST-OPERATIVE WITH RESIDUAL DISEASE AND GH DEFICIENCY

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INTRODUCTION

Craniopharyngioma is an uncommon intracranial tumour in childhood. Even though it is a benign tumour, recurrence of disease may occur which is commonly complicated with endocrinopathy. We present a case of recurrent craniopharyngioma post-resection with residual tumour complicated with multiple pituitary hormone deficiencies, including growth hormone (GH) deficiency.

CASE

A 7-year-8-month-old male presented with persistent headache and symptoms of increased intracranial pressure. MRI Brain showed suprasellar cystic mass. He underwent total resection of the tumour. HPE confirmed craniopharyngioma. He developed central diabetes insipidus, central hypothyroidism and ACTH deficiency post-operatively. Eleven months later, he presented with blurring of vision and increased sleepiness. Brain MRI confirmed recurrence of the tumour. Near-total-excision of the tumour was done as the tumour was adhered to the optic nerve and chiasma. After the surgery, he was under close surveillance for recurrence of disease. Annual MRI Brain surveillance showed stable residual disease.

The patient is currently 12-years-old. Apart from the endocrinopathies mentioned, he is now showing signs of growth hormone deficiency such as hypothalamic obesity with weight BMI at +3.35SDS. He has poor height velocity at 3 cm/year. He has metabolic syndrome including dyslipidaemia, and fatty liver. He also has delayed bone age and poor IGF-1 level. Family counselling was done to explain the role of GH therapy for him, including the risks and benefits.