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Secretory Adrenal Adenoma in Children: A Case Report

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Abstract | **Case Report**

Secretory adrenal adenoma is an uncommon cause of endocrine disturbance in the pediatric population, often presenting with clinical features of hormone excess. This case report describes a 9-year-old girl who presented with a two-year history of progressive virilization, including hirsutism, pubic hair development, obesity, and severe acne. Laboratory evaluation confirmed hyperandrogenism, and computed tomography revealed a 45-mm right adrenal mass. The patient underwent right adrenalectomy, and histopathological examination confirmed a benign adrenal adenoma. Postoperative follow-up demonstrated significant clinical, biological, and psychological improvement with regression of Cushingoid features. This case highlights the diagnostic challenges of pediatric adrenal tumors and underscores the importance of surgical management and long-term monitoring, given the uncertain boundary between benign and malignant adrenal cortical lesions in children.

Keywords: Pediatric adrenal tumor, Virilization, Adrenal adenoma, Hyperandrogenism, Adrenalectomy.

INTRODUCTION

Benign adrenal tumors are a pathological entity that is often discovered incidentally. Benign adrenal tumors are a pathological entity that is often discovered incidentally. Functional adrenal adenoma is a very rare phenomenon whose diagnosis is established clinically and then confirmed exclusively by histological examination.

CLINICAL CASE

This is a 9-year-old girl from an incestuous marriage, admitted for treatment of signs of virilization that appeared two years ago, characterized by adult-like pubic hair, hirsutism, facial and trunk obesity, and severe acne, particularly on the face and back. The patient is overweight at +2 SD.

There is no family history of cancer, particularly sarcomas, breast cancer, or brain tumors diagnosed before the age of 45, omphalocele, macroglossia, macrosomia, a tendency toward neonatal hypoglycemia, ear malformations, or abdominal midline abnormalities that could suggest Li-Fraumeni syndrome or Beckwith-Wiedemann syndrome.

Clinical hyperandrogenism was confirmed by laboratory tests. A CT scan revealed a 45 mm mass in the right adrenal gland. The surgical specimen removed by right adrenalectomy showed a well-encapsulated mass with a smooth surface. The pathological examination revealed an adrenal adenoma.

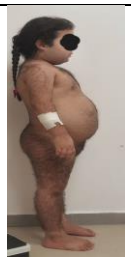

Fig. 1: Clinical image of the patient

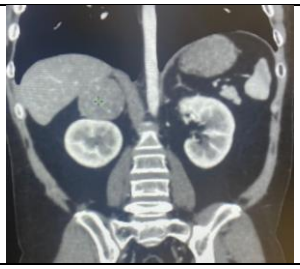

Fig. 2: Coronal CT scan showing an adrenal mass

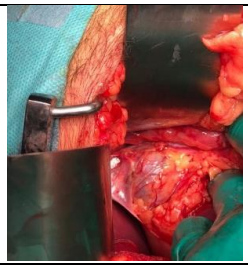

Fig. 3 : Intraoperative image

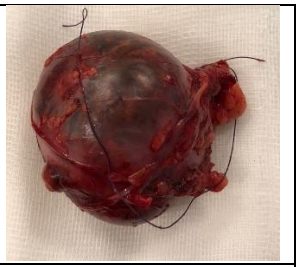

Fig. 4: The operating mass

DISCUSSION

Cushing's syndrome is a rare and serious condition in children. Paraclinical investigations in our patient revealed a benign unilateral adrenal tumor (adrenal adenoma). Surgical removal of the tumor by laparotomy was the cornerstone of treatment.

Its severity is even greater during the transition phase: adolescents, who have not yet finished growing, are psychologically fragile and concerned about their physical appearance and their future. Diagnosis is difficult in adolescents and children.

After three months of surgical treatment, there was a marked biological and psychological improvement. Clinically, there was a regression in blood pressure readings, and physically, there was a stagnation of Cushing's symptoms.

CONCLUSION

This observation illustrated a specific case of cortisol adenoma revealed by generalized hypertrichosis with pseudo-precocious puberty. However, the line between benign and malignant remains unclear in some cases. Conventional adrenalectomy is the main treatment. The outcome is uncertain and the prognosis is good.

Cushing's syndrome is a rare and serious condition in children requiring long-term clinical, biological, and radiological monitoring, even in the presence of radical surgical treatment of the secreting adrenal adenoma.

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