An adrenal tumor presenting as an exagerated adrenarche in a 7 years old girl.

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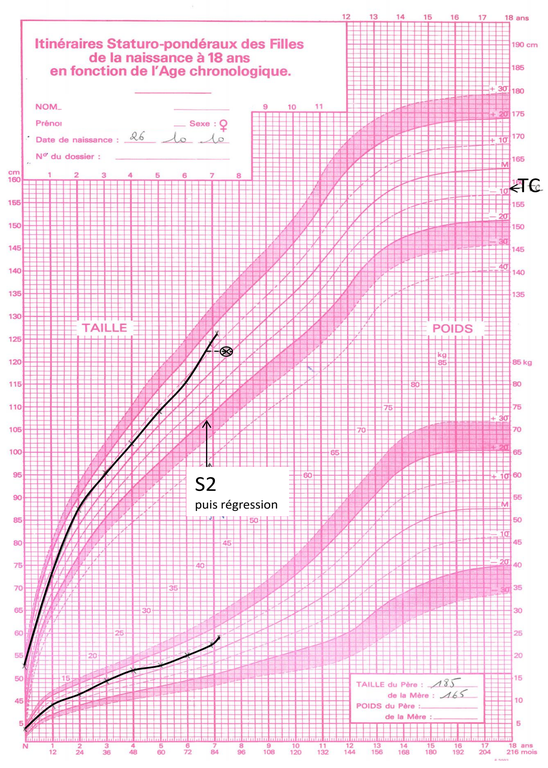
Introduction:

Exaggerated adrenarche is the most frequent diagnosis when children present moderate pubic hair, but others diagnosis have to be ruled out first (1). We report the case of a child whose biological results suggested an exaggerated adrenarche, which was in fact an adrenal tumor.

Case report:

A **6 years and nine months old girl** consulted for precocious pubic pilosity **P3**, with moderate **acne**, and regressive **breast bud**. We noticed accelerated growth speed, her hight going from 0,8 SD to 1,8 SD in 1 year. The skeletal development was advanced to 7 years and 6 months.

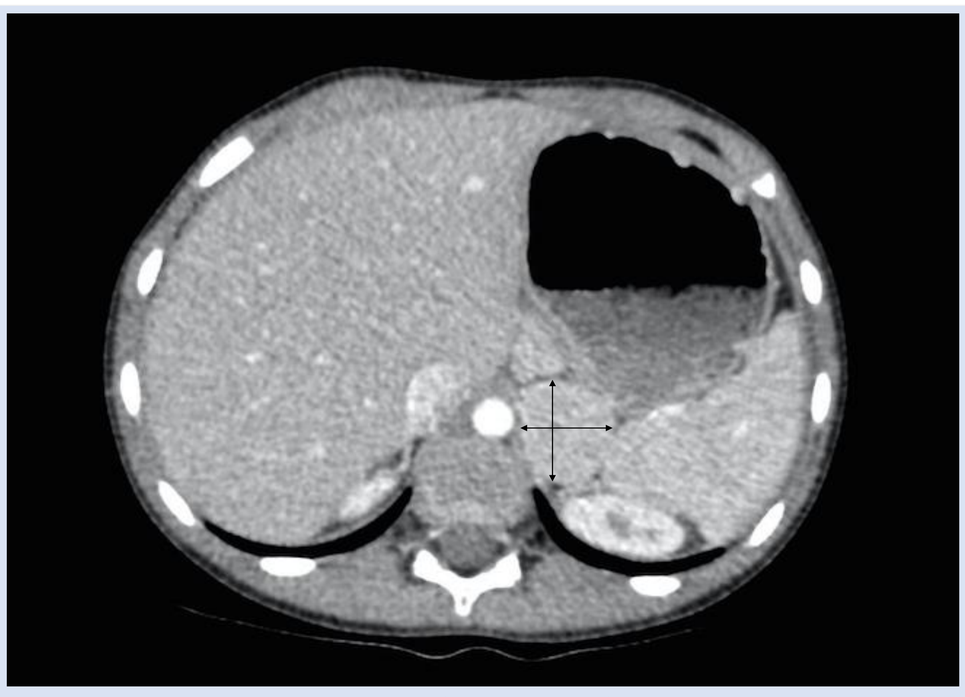
The 17OH-P and 11-deoxycortisol response to synacthene test was normal. The LH and FSH peaks were 0,9U/l and 5,8U/l respectively during the LH-RH test. Uterine length was 23mm on pelvic ultrasound, ovaries were normal sized.



Andogrens *(N for P3 girl)*	6y 6m	7y 2m	7y 3m
Testosterone (ng/ml, N<0,3)	0,5	0,31	0,37
SDHEA (mg/l, N 0,2-1,28)	1,9	3,1	2,5
Δ4-androstenedione (ng/ml, N 0,4-1,8)	2,5	1,5	1,5

The SDHEA was measured at 1,9mg/l, delta 4-androstenedione was 2,5ng/ml and testosterone level was 0,3ng/ml. Because of a clinical picture more important than usually, associated to accelerated growth speed and a **borderline level of testosterone**, an adrenal tomography was performed, finding **an adrenal mass measuring 3,5cm**.

The child underwent laparoscopic adrenalectomy. The tumor histopathological analysis diagnosed an encapsulated adrenal adenoma. The level of androgenic steroids normalized after surgery.



Adrenal tomography

Conclusion:

Adrenal tomography cannot be systematic in front of a clinical and biological picture of non agressive premature adrenarche. It becomes essential if adrenarche is rapidly increasing, or if there is an advance in statural growth, even if SDHEA is “normal for an exaggerated adrenarche”.(2,3).
Adrenal tumors are rare in children, but often present with clinical signs of virilization (90%). Early diagnosis, meaning small size, is necessary to provide a good prognosis with surgery as the sole therapy, regardless of tumor histiotype (4).

Bibliography:

1. Williams RM et al. Premature adrenarche. Arch Dis Child. march 2012.
2. Likitmaskul S et al. « Exaggerated adrenarche » in children presenting with premature adrenarche. Clin Endocrinol (Oxf). march 1995.
3. Voutilainen R et al. Premature adrenarche: Etiology, clinical findings, and consequences. J Steroid Biochem Mol Biol. jan 2015.
4. Michalkiewicz E et al. Clinical and Outcome Characteristics of Children With Adrenocortical Tumors: A Report From the International Pediatric Adrenocortical Tumor Registry. J Clin Oncol. march 2004.

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