Visual impairment revealing a Growth hormone-producing pituitary adenoma in an 14-year-old boy: a case report

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Background:

Gigantism indicates excessive secretion of growth hormone (GH) during childhood.
Pituitary gigantism is very rare and the description of the disease is limited to small series and case reports.
Here, we report a case of pituitary gigantism in a child revealed with visual defect.

Case report:

A 14-year-old boy presented with headache and left visual loss . On examination,he had visual acuity in his right eye of 2/10.His height was 178.0 cm (3 cm above standard deviation) and body weight was 65 kg (+2,5 standard deviation). He showed enlarged hands and feet, and prognathic mandibles. His bone age was normal for chronological age.
Laboratory investigation showed the following results: random serum GH of 46,9 ng/mL(0–10 ng/mL); insulin-like growth factor 1 (IGF-1)=1370 ng/mL (220–616 ng/mL);
IGF-BP-3=6000 ng/mL (2,200–5,900 ng/mL);

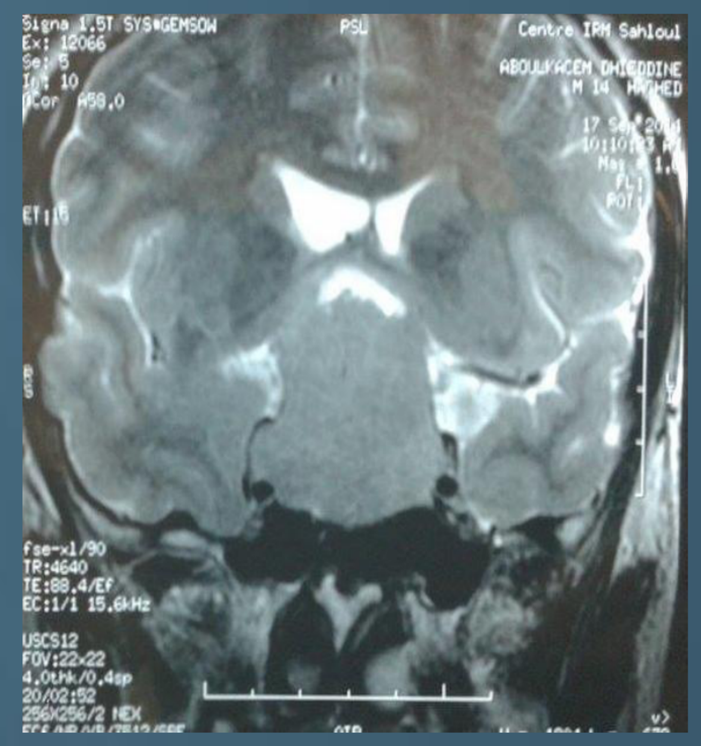

Figure n°1: MRI showed macroadenoma

and prolactin=12 ng/mL (3–25 ng/mL), free T4=5,5 (7-19 pmol/l) and cortisol= 110 ng/ml (70-200ng/ml). Magnetic resonance imaging (MRI) of the brain
revealed a 50-mm-sized pituitary adenoma.

The patient was put on hormonal replacement and transsphenoidal surgery was performed. Pituitary MRI scan was performed 6months after surgery and showed residual tumor. Medical treatment with a somatostatin analogue for six months was successful. GH level was 0.6 ng/mL and IGF1 was 205 ng/mL.

Discussion:

We report a case of childhood gigantism caused by GH secreting pituitary adenomas which seems to be more invasive and aggressive in children than in adults.

Treatment of pituitary gigantism in childhood is difficult and often unsatisfactory. Our patient should be closely followed up for the potential risk of developping of other hormonal deficiency.