ACROMEGALY DUE TO A GH-SECRETING PITUITARY ADENOMA IN THE SPHENOID SINUS

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CLINICAL CASE

Introduction

Acromegaly is a rare, chronic disease characterized by an excess secretion of growth hormone (GH) and increased circulating insulin-like growth factor 1 (IGF-1) concentrations. 95% of cases harbour a GH-secreting pituitary adenoma. In less tan 5 % of cases are due to an excess of GH releasing hormone (GHRH) secretion from a hypothalamic tumor or a neuroendocrine tumour

Observations

A 54-year-old woman was admitted to the Urology department due to a nephritic colic. Her medical record included DM2 treated with metformin and obesity. An endocrinologist was consulted due to poor DM2 control. Coarse facial features and large hands were observed, suspicious of an acromegaly. IGF-1 level was 406 ng/mL, with a HbA1c of 10.4%. She was discharged with insulin and metformin and had an appointment in two months. IGF-1 level was **711** ng/mL and HbA1c **7.8**%. (**Table1**) Oral glucose tolerance test was not done. Treatment was started with octreotide LAR 20 mg per month. A MRI of the brain showed an empty sella turcica with compression of the pituitary gland on the pituitary fossa. GHRH was normal and the octreoscan did not show lesions. Given the poor control of acromegaly, the dose of octreotide was increased to 30 mg and pegvisomant was added 10mg/day until 20 mg/day, without normalizing the IGF-1level. A new pituitary MRI was requested (**Fig1**), which revealed an intrasphenoidal lesion on the right side greater than 1 cm in contact with the pituitary fossa. It was confirmed by a CT of the paranasal sinuses.

An endoscopic transsphenoidal surgery was performed, noticing a tumour on the right side of the sphenoid sinus that infiltrated the clivus. The anatomical pathology report was compatible with a GH-secreting pituitary adenoma with Ki-67: 1% and p53 negative. After surgery, the IGF-1 level normalized and no remnant in MRI made in private clinic

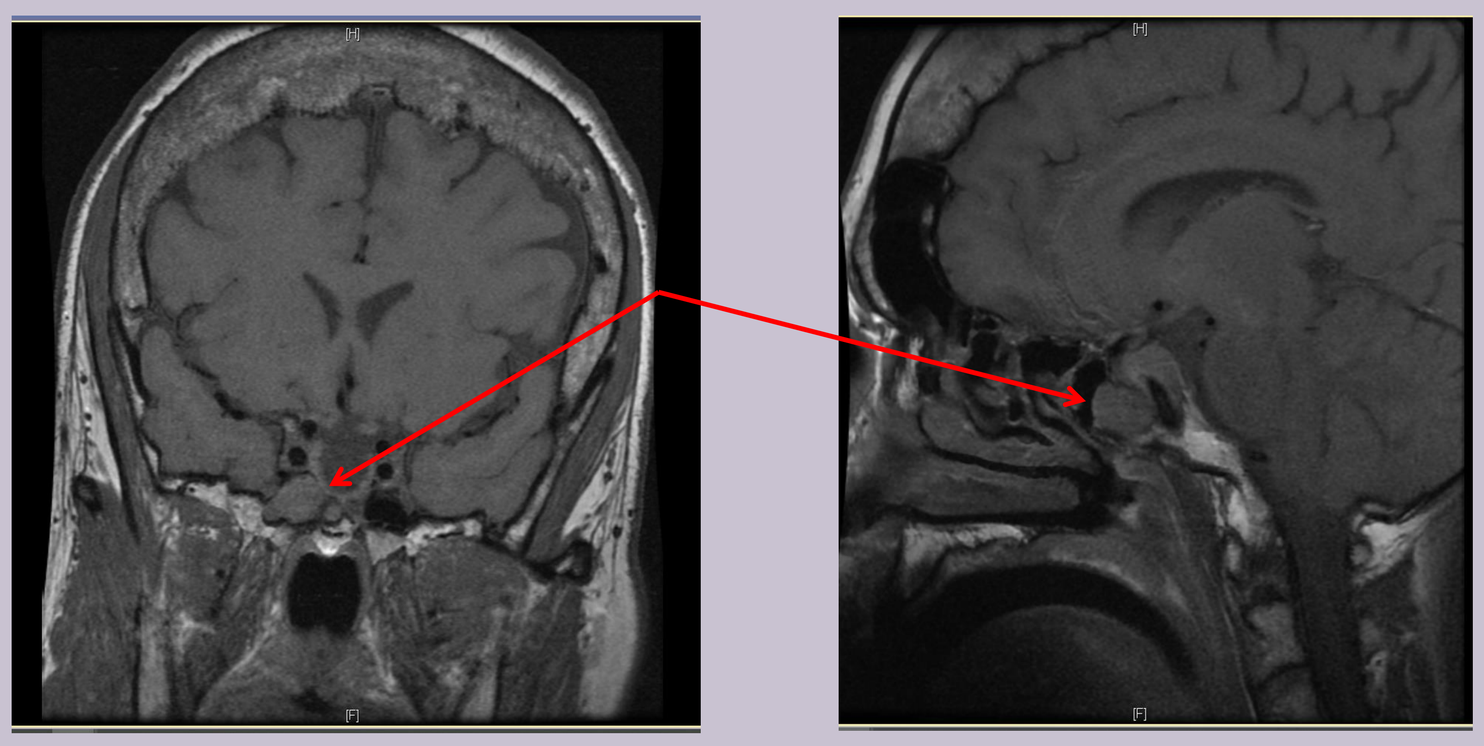

Fig 1 MRI T1 coronal and sagittal images

	Before Surgery	After surgery (2 months)	Reference Values
TSH	1,14 µUI/mL	1,18	0,350 - 4,940
fT4	0,91 ng/dL	0,89	0,70 - 1,48
Prolactin	6,7 ng/mL	13,4	
FSH	31,5 mUI/mL	31,9	26-133
LH	14,69 mUI/mL	8,8	5,2 - 62
Cortisol	12 µg/dL	16	3,70 - 19,40
HGH	6,79 ng/mL	3,70	0,05 - 7,40
IGF-1	711,0 ng/mL	187	87 - 307
Glucose	137 mg/dL	87	70 - 110
HbA1c	7,8 %	-	<7%

Table 1

Discussion

- It is important to carefully evaluating the structures surrounding the sellar turcica when a pituitary adenoma is not found in it.

- Adenomatous pituitary tissue within the sphenoid sinus can be explained by a pituitary tumor that protrudes inferiorly or more rarely, from pituitary embryological remnants located in the sphenoid sinus