Giant macroprolactinoma in a female adolescent– case report

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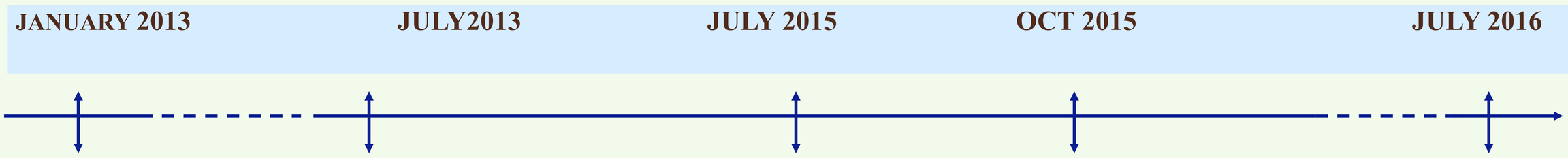
Background:
Known to be the most common pituitary tumour in adults, prolactinoma is rare in children and adolescent with an evolution that tends to be controversial.

Case presentation:
Female, 12 years-old, complaining of headaches and progressive visual loss



Diagnostic

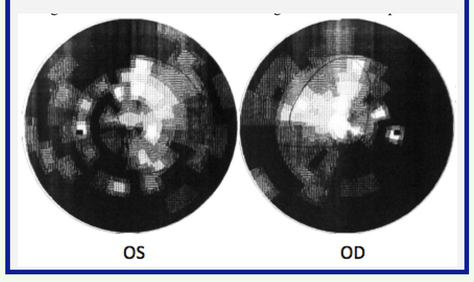
Clinical:
. Headache
. Sudden bitemporal hemianopsia and bilateral ambliopia

Homone evaluation:
TSH=1,31uUI/ml, fT4=0,94ug/dl
Cortisol=358,3 nmol/l (N=171-536 nmol)
Prolactin=169 164 uUI/ml (N< 210)
hGH=0,06 (0,14-11,7 ng/ml)

Imaging

MRI showed a pituitary macroadenoma, 6,6 X 7,3 X 6,1 cm with compression of the optic chiasm and bilateral cavernous sinus invasion

Visual field evaluation:
Papillary edema to both eyes



Treatment:
. Surgical debulking via classic aproach with partial resection of the pituitary mass

The 6 months follow-up

Clinical:
. Improvement of sight
. Adequate weight and height
. Tanner stage - PI BI

Hormone evaluation:
TSH= 1,4uUI/ml, fT4=0,8 ug/ml
hGH<1,10 mUI/ml
Prolactin= 9340 ng/ml (N=4,79-23,3 ng/ml)
Cortisol=310,2nmo/l(171-536nmol)
AFP=1,56 ng (<7 ng)

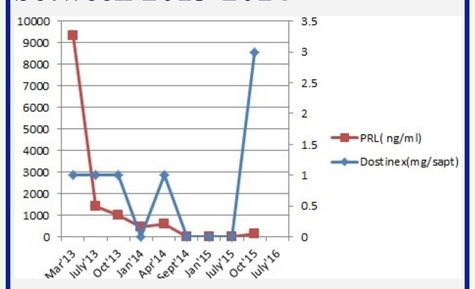
Histopathological examination and imunochemestry
. Highly positive for sinaptophysine and PRL, LH and TSH in isolated cells
. **Prolactinoma** with a high proliferative activity Ki67 =15%

Imaging
. Persistent pituitary mass of 56/34/35 mm with suprasellar extension

Visual field examination
. Persistent bitemporal hemianopsia to the LE
. temporal quadroanopsia to the RE

Treatment:
. Dopaminergic agonist- Cabergoline 1mg/week

Monitoring of the treatment with Cabergoline doses ranging from 1 mg to 2,5 mg/week between 2013-2014



Clinical:
. No headaches
. Weight gain

Hormone evaluation:
TSH=2,25uUI/l, fT4=0,66 ng/dl
PRL= 303 ng/ml (N<20ng/ml)
FSH=5,79UI/ml, LH=2,22UI/ml, estradiol=74pg/ml

Imaging
MRI revealed a persistent sellar and suprasellar mass (48/30/33 mm) with discreet extension to the cavernous sinus, but with no general mass effect

Visual field examination
. Bitemporal hemianopsia
. Partial optic atrophy

Treatment:
. Cabergoline 3 mg/week
. LT4= 50 ug/daily

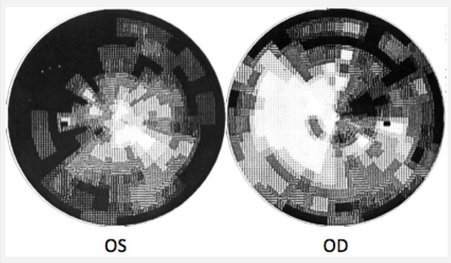
Follow-up

Clinical
. T=154 cm (+1,4 DS)
. W=+3,2 DS, BMI=32,5 kg/m²
. Tanner stage -P4 B2-3
. Achantosis nigricans in the cervical region

Biochemestry:
Glycemia= 99mg/dl, (N =70-100mg/dl)
Insulin =38 uUI/l HOMA-IR=9,29
Cholesterol= 214 mg/dl (N=< 200)

Hormone evaluation:
PRL =157 ng/ml
Thyreotropic insufficiency
TSH=0,7 uUI/l, fT4=0,72ng/dl
Gonadotropic insufficiency
FSH=2 mUI/ml, LH=0,395mUI/ml, estradiol=44,9 pg/ml
Somatotropic insufficiency
hGH=< 0,05ng/ml, IGF1=156 ng/dl
ACTH=28 pg/dl ,cortisol=10,5 ug/dl

Visual field examination:

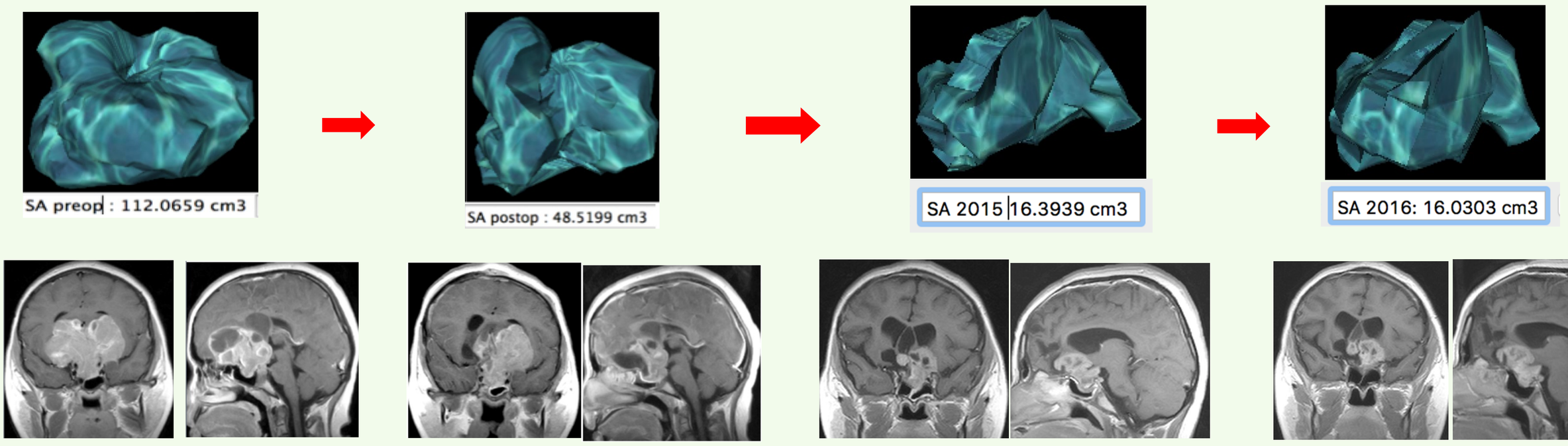


Treatment:
. Cabergoline 3,5 mg/week
. LT4=100 ug/daily

Hormone evaluation– not done due to medical noncompliance

Imaging : persistent pituitary mass with evident narrowing of the tumor.

Treatment
Continuing the treatement with Cabergoline at the doses of 3,5 mg until further evaluation



Conclusions

. Being this fairly rare tumor in children, there is a lack of treatment guidelines. Inspite of the prompt debut of the medical treatment, the control of the disease was also difficult to achieve because of low medical adherence.
. The postoperative management of this case proves to be provoking, both in the control of the secretion of this large sellar mass, but as well in the ensuring of growth and puberty installation.

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