Spindle cell oncocytoma: a new presentation of a rare disease

Nunes da Silva T., Pereira B., Vara Luiz H., Velosa A., Matos AC., Portugal J.1

1Endocrinology department, Hospital Garcia de Orta, E.P.E.Almada Portugal 2Pathology department Hospital Garcia de Orta E.P.E. Almada Portugal

Introduction:
Spindle cell oncocytoma (SCO) is a rare spindle to epithelioid, oncocytyc, non-endocrine neoplasm of the adenohypophysis with significant intra and supra-sellar infiltration. First described in 2002, it was codified as a separate entity in the 2007 and has been reported 18 times in the literature. Its clinical characteristics are similar to the much more prevalent pituitary macro-adenoma and has no reliable imagiologic criteria that allow its pre-surgical diagnosis. Despite a preliminary WHO grading of I, a recent review of 18 cases showed recurrent disease post-surgery in 7, with a median time of 3 years (range 1-13).

Case description:

1. Men, 65 years, sawman, without relevant past medical history
2. Progressive visual blurring and episodic headaches since 12/2012

Admitted to the neurosurgery unit:

<table>
<thead>
<tr>
<th>Test</th>
<th>Value</th>
<th>Reference range</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSH</td>
<td>0,46 mU/L</td>
<td>0,1-4 mU/L</td>
</tr>
<tr>
<td>Total T4</td>
<td>1,8 ug/dL</td>
<td>5,14-14,1 ug/dL</td>
</tr>
<tr>
<td>LH e FSH</td>
<td>&lt;0,1/0,4 UI/L</td>
<td>1-7/1-12 UI/L</td>
</tr>
<tr>
<td>Total Testosterone</td>
<td>&lt;10 ng/dl</td>
<td>180-750 ng/dl</td>
</tr>
<tr>
<td>IGF1</td>
<td>49,5 ng/ml</td>
<td>75-212 ng/ml</td>
</tr>
<tr>
<td>Prolactin</td>
<td>38,2 ng/ml</td>
<td>1,6-20 ng/ml</td>
</tr>
<tr>
<td>ACTH</td>
<td>&lt;5 pg/ml</td>
<td>9-50 pg/ml</td>
</tr>
<tr>
<td>Cortisol</td>
<td>0,4 ug/dL</td>
<td>7-25 ug/dL</td>
</tr>
</tbody>
</table>

Emergency department in 2/2013:
1. Ophthalmologic evaluation: bitemporal hemianopsia
2. Head CT, 25 mm supra-sellar nodule

Right frontal craniotomy with partial removal of lesion

Highly vascular tumor with difficult cleavage plan from the pituitary

Spindle cell oncocytoma WHO grade I

CT: supra-sellar tumor with 29*23*31 mm sharply demarcated from the pituitary. It also molded the optic chiasm (not shown)

Light microscopy with H&E showing interlacing fascicles of spindle to epithelioid cells with eosinophilic, variably oncocytic cytoplasm(A and B)

Immunohistochemistry: (+) immunostain for vimentin (C), S100 (D), focal EMA and (-) for GFAP and citokeratins. Ki 67 < 1% (E)

Clinical follow-up

Clinically after surgery:
✓ Central Diabetes Insipidus
✓ Pan-hypopituitarism
✓ Partial vision recovery

Hydrocortisone 20 mg/day Levotiroxine 75 ug/day DDAVP 3x/day

MRI 5 months latter: reduction in the tumor volume to 21*19*21 mm and a thin optic chiasm.

Discussion:
The authors present the first described SCO case with only supra-sellar presentation. This unique characteristic increases the difficulty of an already challenging preoperative diagnosis as it further shows that there are no clinical of radiologic signs that allow a differential diagnosis with the much more prevalent pituitary macro-adenoma.

Bibliography: