

*** Anomalous venous drainage another difficulty for the diagnosis of Cushing's Syndrome.**

Authors: L. Suárez , J. Aller Granda, Joaquin Pertierra de la Uz, Laura Cacho García, Juan Luis Fernández Morera, Edelmiro Menendez Torre. Hospital de Cabueñes and Hospital Universitario Central de Asturias.

INTRODUCTION:

It is known that about 75% of cases of endogenous Cushing syndrome to a pituitary adenoma (HA) ACTH-producing, 15% to ectopic ACTH and 10% is due to adrenal adenoma.

CASE REPORT :

The patient was 64 years old, derived from Diabetes Mellitus type 2 of about 16 years of history with an unwieldy + hypertension diagnosed in 2007 with no physical signs compatible with hypercortisolism and incidentally detected a left adrenal adenoma 2 cm

SUPPLEMENTARY TESTS:

- ❖ Screening: 1) Nugent Test: 20,9. 2) Morning Cortisol : 11.2; morning ACTH .: 21.7; evening Cortisol.: 11.3; evening ACTH .: 14.7; Free cortisol 24 h urine(UCF) : 713 (36-137).
- ❖ Suppression 2 mg of dexametasona four 6 hours : UCF 24H: 483 and morning cortisol 10.3.
- ❖ After 8 mg of DXM at 23 hours : Morning Cortisol : 23.
- ❖ In MRI pituitary : microadenoma left 3 mm. so petrosal sinuses catheterization there is no clear lateralization and showed anomalous venous drainage .
- ❖ To rule ectopic Cushing, scan were performed with somatostatin receptors (negative), In CT existence of a millimeter thoracic nodule in the LSI without observing other injuries suprarenal adenoma and left unchanged in size
- ❖ Bilateral inferior petrosal sinus sampling:

Left petrosal sinus	Prolactin	Cortisol a.m.	ACTH a.m
- 5'	39.69	15.85	25.9
- 0'	37.13	15.46	27.6
2'	39.44	NO	41.5
5'	52.13	NO	33.6
10'	37.85	NO	36.7

Right Petrosal sinus	Prolactin	Cortisol a.m.	ACTH a.m.
- 5'	27.35	15.37	28.5
- 0'	30	15.56	17.3
2'	33.26	NO	19.8
5'	36.72	NO	42.4
10'	34.07	NO	31.2

peripheral	Cortisol	ACTH	PROLACTIN
- 5'	17.08	13.6	27.72
- 0'	18.02	18.6	23.80
2'	16.80	17.1	
5'	17.53	19.9	31.42
10'	16.47	24.5	
15'	15.75	21.9	
30'	18.63	20.1	
60'	16.60	20.6	
90'	18.26	30.1	
120'	20.72	31.6	

Catheterization of both inferior petrosal sinuses was performed through a percutaneous bilateral femoral vein approach. There was difficulty in introducing the catheter and was advanced into a petrosal sinus, a small amount of contrast material was injected to verify the location of the catheter tip and anomalous venous drainage. Also contrast was seen going from one side and returning from other side through cavernous sinus confirming correct catheterization.

After many studies, we decided to repeat like pituitary MRI, so after pharmacological control: Ketoconazole 200 mg (2-1-1), metopirone 250 mg (3-2-2) intervention was decided transsphenoidal with disappearance of injury in MRI.

CLÍNICAL JUDGMENT : Cushing's disease

DISCUSSION:

Petrosal sinus catheterization is the most effective means of diagnosis of pituitary Cushing vs ectopic. But it should not be considered definitive for the diagnosis because I like in this case had an abnormal venous drainage not help the diagnosis. Moreover, as in this case the size of AH <1 cm detection depends interobserver variability. Therefore, as in this case we must evaluate the results together to reach the final diagnosis.