



# Ectopic Pituitary Adenoma in the Clivus Causing Cushing's Disease

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## BACKGROUND

Pituitary adenomas are the most common lesion arising from the sella and constitute 10-15% of primary brain tumors. However, in rare instances, adenomas can occur ectopically. The most common ectopic locations include the suprasellar region, sphenoid sinus, cavernous sinus and clivus.

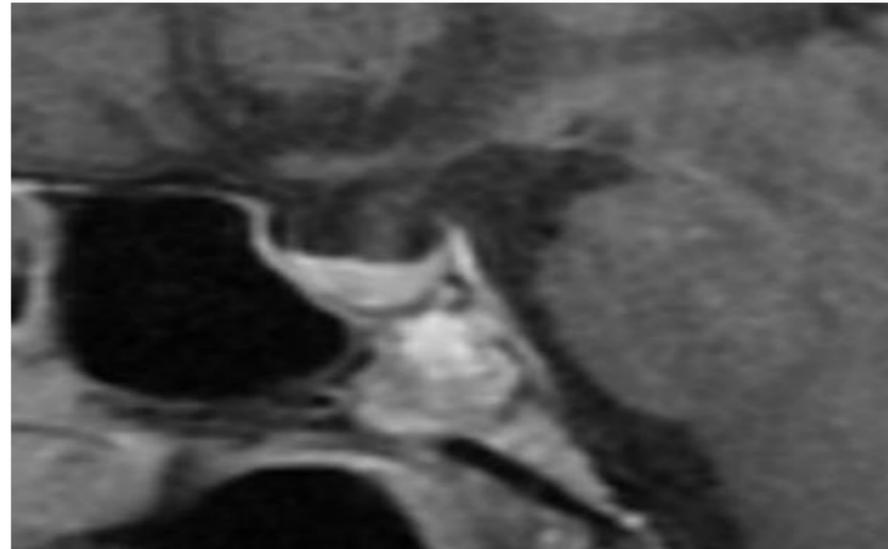
## CASE HISTORY

A 33 year old woman presented with weight gain, fatigue, hirsutism, development of acne and mild headaches. An endocrine workup was initiated and found elevated serum prolactin and ACTH levels. Salivary cortisol and 24 hour urinary cortisol levels were also elevated.

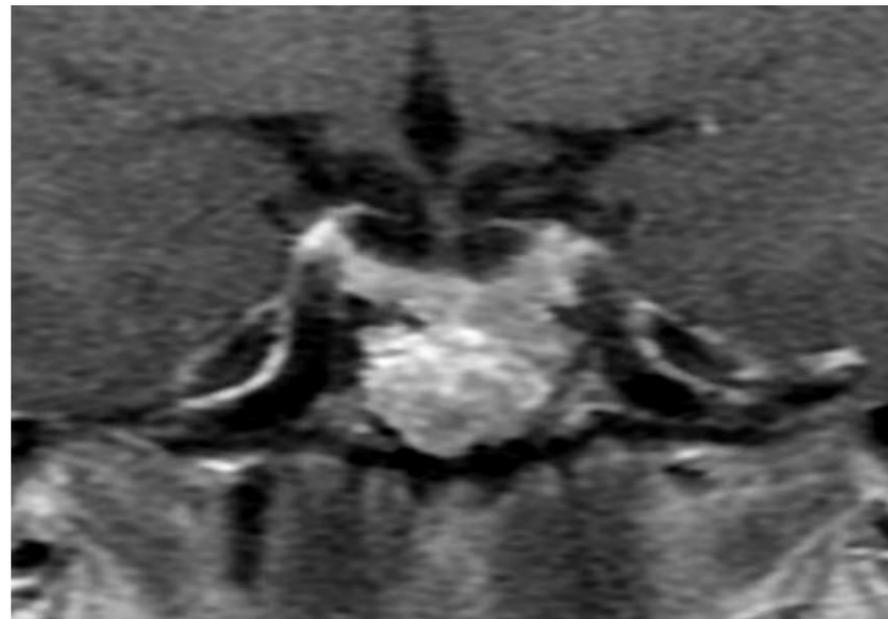
The patient subsequently underwent MRI imaging of the brain with selected images included.

Transsphenoidal biopsy and partial resection demonstrated a large tumor, the bulk of which lay within the clivus, outside the dura of the sella turcica. Pathology revealed the mass to be a pituitary adenoma with diffuse immunoreactivity for ACTH and chromogranin and immunonegative for GH, FSH, LH, TSH, and prolactin.

## IMAGING FINDINGS



Sagittal and coronal post GadT1 –weighted images demonstrate a heterogeneously enhancing mass within the superior portion of the clivus. The sella and pituitary have a normal appearance.



## DISCUSSION

Clival tumoral masses are uncommon and can have nonspecific imaging characteristics. The differential diagnoses for the mass presented in this case included pituitary adenoma, histiocytosis, ectopic pituitary adenoma, or chordoma.

The location of ectopic pituitary tissue can be explained by the embryological formation and involution of the craniopharyngeal duct. Pituitary tissue can become stranded along the course of the duct during this process. In rare instances, these ectopic cell rests can become adenomatous. The clival location of this adenoma corresponds to the presence of pituitary tissue in the persistent craniopharyngeal canal.

Most reported cases of clival ectopic pituitary adenomas were either prolactin secreting or nonfunctioning. This is a unique case of an ectopic pituitary adenoma composed predominantly of ACTH –secreting cells resulting in Cushing's Disease.

## REFERENCES

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