



Video Abstract

Surgical resection of giant extrasellar thyrotropinoma: Use of orbitozygomatic and endoscopic endonasal approach

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ABSTRACT

Background: Thyrotropinomas (TSHoma) are rare pituitary adenomas.

Case Description: A 34-year-old female presented with mild bitemporal field defect in third trimester with intact pituitary function. MRI demonstrated an enhancing lesion from the posterior planum to suprasellar, interpeduncular and prepontine cisterns with chiasmal compression and right fetal posterior communicating artery encasement. With no sellar expansion, the differentials included meningioma or craniopharyngioma. She underwent a postpartum expanded endoscopic endonasal transtuberulum transchiasmatic sulcus approach [Video 1]. The lesion was debulked in the chiasmatic cistern to decompress the chiasm with preservation of superior hypophyseal perforators. Pituitary transposition and midclival approach to access the retrosellar component was not undertaken pending formal histology as the lesion encased the perforators and was atypical for the outlined differentials. In addition, the diaphragm was intact. Postoperatively, visual field normalized and the patient developed mild diabetes insipidus. Following the diagnosis of TSHoma (with an abnormal thyroid function test [TFT]) and due to patient preference and slightly increased risk of CSF leak with revisional endoscopic procedure, she underwent an orbitozygomatic craniotomy (pretemporal and transylvian approach) without tentorial division to resect the disease in the interpeduncular and prepontine cisterns [Video 1]. The anatomical triangles and tumor characteristics facilitated this. A residual cuff was left along the base of the stalk and the floor of the third ventricle to preserve the superior hypophyseal and thalamoperforators. Postoperatively, the patient had normal TFT without any neurological deficit.

Conclusion: Operative treatment strategy is presented for a rare large challenging multicompartamental extrasellar TSHoma using endoscopic endonasal and open skull base approaches.

Keywords: Endoscopic endonasal, Giant, Orbitozygomatic, Thyrotropinoma

[Video 1]-Available on:

www.surgicalneurologyint.com

Annotations

- 1) 00:00: Clinical presentation
- 2) 01:08: Intraoperative findings during endoscopic procedure
- 3) 02:33: Set up and positioning
- 4) 03:38: Operative video
- 5) 08:24: Disease background and clinical outcome.

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Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent.

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Conflicts of interest

There are no conflicts of interest.

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