AN UNUSUAL PRESENTATION OF PITUITARY MACROADENOMA

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Report of Case A 45-year-old male presented with a 10-day history of acute onset of severe headache associated with vomiting. Diminution of vision and inability to open the eyes since 6 days. On examination vitals were stable. Glasgow coma scale was 15/15. Ocular examination revealed visual acuity of perception of light in the right eye (RE) and 1/60 in the left eye (LE). He had a chin up head posture with bilateral complete ptosis and frontalis muscle overaction. Exodeviation was seen in the RE. Complete ophthalmoplegia was noted in the LE. Restriction of movements in all gazes except for levoversion (abducent nerve spared). Right pupil was 3mm (sluggishly reacting to light) and 5mm (not reacting to light) in the left. All the other cranial nerve examination was normal. Rest of the anterior segment was normal. Fundoscopy revealed healthy optic disc with clear disc margins and cup disc ratio of 0.4:1 with normal macula and periphery in both the eyes. Visual fields could not be assessed as the patient was uncooperative. There were no other focal neurological deficits.

Figure 1: patient at the time of presentation

Figure 2: Extraocular movements in all nine gazes
Right eye: restriction in elevation, depression, adduction and minimal restriction of abduction.
Left eye: Complete ophthalmoplegia
Cranial and pituitary Magnetic resonance imaging (MRI) revealed an expansile lesion at sellar and suprasellar regions (4.1cm*3.96cm*3.44cm) with compression of optic chiasm superiorly and cavernous sinus structures on both the sides (Left > Right) involving 3rd, 4th, 6th cranial nerves. The lesion exhibited patchy areas of necrosis, hemorrhages with heterogeneous enhancement, suggestive of pituitary apoplexy. Dural-tail sign was seen extending along the retroclival region upto C1.

![Figure 3(A, B): MRI brain](image)

**Figure 3(A, B): MRI brain**
A. Saggital view (T1) – pituitary apoplexy with dural-tail sign.
B. Coronal view (T2) at the level of orbits and – pituitary apoplexy compressing the cavernous sinus structures on both sides and optic chiasma superiorly.

He underwent trans-nasal, trans-sphenoidal near total excision of pituitary tumour with sellar floor repair using autologous bone graft. Histopathological examination of the excised mass was compatible with pituitary apoplexy. Immediate postoperative period the patient was stable with improving visual disturbances, bilateral ptosis and without any fresh neurological deficits. There were no electrolyte disturbances, diabetes insipidus or CSF rhinorrhea. After endocrine evaluation, he has been treated with steroids, thyroid supplements and injection testosterone monthly.

On review during the 4th postoperative month, the visual acuity significantly improved to 6/9p in RE and 6/6p in the LE. RE examination was normal. There was mild ptosis and partial third nerve palsy (resolving) in LE. During his last follow up (10th month post operatively) had complete recovery of ptosis and extraocular movements.

![Figure 4: last follow up (10th month postoperatively complete recovery of ptosis)](image)
DISCUSSION
Pituitary apoplexy is an acute medical emergency with hemorrhage or infarction in the pituitary gland causing damage to the gland and surrounding sella structures due to the size of the tumor. The earliest and the most common clinical presentation includes headache followed by ocular palsies. Optic chiasmal compression on upward enlargement of intrasellar contents presents with decreased visual acuity and visual field defects (bitemporal hemianopia). Extravasation of blood in subarachnoid space can cause meningism, fever, photophobia and altered consciousness level. Pituitary apoplexy presenting with bilateral ocular motility dysfunction is rare.1,2

Dural-tail sign evident on MRI in patients with different intracranial pathologies was found that it is more sensitive and specific to meningioma but not pathognomonic of meningioma and relatively uncommon in pituitary adenoma.3 The management of pituitary apoplexy includes complete biochemical, endocrine evaluation and imaging (MRI or CT sella). Surgical decompression may be necessary when the visual deficits are rapidly progressive. Pharmacological treatment with high-dose steroids is the approach of choice when symptoms are mild. Finally, long-term hormone replacement treatment can be necessary if hypopituitarism occurs, but pituitary function should be reassessed over the medium and long term.4 Pituitary apoplexy should be considered in any patient with abrupt neuro-ophthalmological deterioration associated with headache. The presentation may be confused with sub-arachnoid hemorrhage or meningitis. This is a medical emergency which requires a multidisciplinary approach and excellent recovery is achieved when appropriately managed during the acute and subacute phase of the disease.5,6

REFERENCES