**Introduction**

Pituitary tumor apoplexy is a life threatening clinical syndrome in which the patient presents with acute headache, visual disturbances, and altered mental status. The syndrome is precipitated by a sudden hemorrhagic or ischemic event in a pre-existing pituitary adenoma, leading to rapid increases in pressure and compression of the surrounding structures.

**Objectives**

1. To present a rare case of blunt force trauma as a precipitating cause of pituitary apoplexy.
2. To highlight the atypical clinical presentation of pituitary apoplexy.
3. To encourage increased monitoring and advanced image screening of post-traumatic patients with known sellar masses.

**Case**

We present a rare case of a 63-year-old male who developed pituitary apoplexy (PA) after sustaining a closed head injury from assault with a metal pole. The patient had a known pituitary tumor for which he had previously declined surgical resection. On initial CT scan there was no traumatic intracerebral hemorrhage or subarachnoid hemorrhage (Figure 1). There was sellar expansion but no obvious sellar hemorrhage. Several days following admission the patient was presumed to have sepsis after developing altered mental status, fevers, hypotension and tachycardia. MRI of the brain with and without gadolinium revealed a poorly enhancing, necrotic, and hemorrhagic pituitary mass, consistent with pituitary tumor apoplexy (Figure 2).

**Results**

After administration of intravenous glucocorticoids, the patient underwent emergent endoscopic transsphenoidal resection of the pituitary tumor apoplexy. Postoperatively, the patient had neurological improvement with stable vision.

**Discussion**

This case highlights the diagnostic challenges faced when evaluating patients with PA secondary to trauma. PA manifested with symptoms of acute anterior hypopituitarism including fever, hypotension, and tachycardia. This symptomatology often mimics that of sepsis and infectious etiologies, masking the diagnosis of PA. Previously reported cases of traumatic PA similarly presented with fever, headache, and neck stiffness, prompting a high suspicion of bacterial meningitis. Neurosurgeons should recognize all the possible presentations of PA, especially if there is a sellar mass noted on radiographic findings in the context of a closed head injury. MRI is paramount for radiographic diagnosis, and treatment should include immediate intravenous corticosteroids and urgent or emergent transphenoidal surgery.

**Conclusions**

Head trauma is a rare inciting factor of PA, and this is the first reported case following assault. Early and accurate diagnosis is important to allow for timely neurosurgical intervention. Symptoms of fever, hypotension, and tachycardia in a patient with a known sellar mass should raise the suspicion of hypocortisolemia from pituitary tumor apoplexy.

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**Figure 1 (Left):** Axial CT Head without contrast which shows an enlarged sellar mass (asterisk) extending into the sphenoid sinus (white arrow, right panel).

**Figure 2 (Bottom):** A and B: Sagittal and coronal post-gadolinium T1-weighted MRI showing an existing non-functioning pituitary macroadenoma in 2014. C and D: Sagittal and coronal post-gadolinium T1-weighted MRI showing a poorly enhancing enlarged pituitary tumor with hypointense T1 shortening consistent with hemorrhage and necrosis, suggestive of PA. There is presence of a thickened and enhancing sphenoid sinus mucosa (arrow). E and F: Sagittal and coronal post-gadolinium T1-weighted MRI showing near-total resection of the pituitary tumor with decompression of the optic chiasm and anatomic restoration of the normal pituitary gland and stalk (arrow heads).