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# POSTPARTUM PITUITARY APOPLEXY – A RARE CASE REPORT

**KEY WORDS:** apoplexy, antepartum haemorrage, headache, blurring of vision

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**ABSTRACT**

Pituitary apoplexy is a rare endocrine emergency in which the pituitary gland undergoes infarction or hemorrhage. The sudden increase in sellar contents compresses surrounding structures and portal vessels, resulting in sudden, severe headache, visual disturbances and impairment in pituitary function Pituitary apoplexy can be managed either by surgery or by conservative treatment. In our case, 38 years G3P1101 at POG 35 weeks 5 days with history of previous lower segment cesarean section reported with antepartum haemorrage. She underwent LSCS in view breech presentation with APH. She had intraoperative GTC seizure with high BP recording and put on Prichard's regimen. She complained severe headache and blurring of vision on postoperative day one and on evaluation she was diagnosed with Pituitary apoplexy on neuroimaging. She was put conservative management in consultation with endocrinologist and improved. In such patients a high index of clinical suspicion is essential to diagnose this condition particularly in a setting where patient does not have any past history of pituitary related signs and symptoms. Prompt diagnosis and conservative management even without surgery may be life-saving'

## INTRODUCTION

Pituitary apoplexy is a rare endocrine emergency in which the pituitary gland undergoes infarction or hemorrhage[1]. It has very rarely been described during pregnancy and postpartum period, when it is potentially life threatening, if unrecognized. The true prevalence, however, is still unknown Grand'Maison et al. estimated pituitary apoplexy prevalence in pregnancy and the postpartum period (PP) to be 1 per 10,000 term pregnancies[2]. Pituitary apoplexy mostly occurs spontaneously; however, precipitating factors can be identified in 10-40% of cases.

Pituitary apoplexy results from an acute bleeding into a pre-existing pituitary adenoma or in the physiologically enlarged gland[3]. Lactotroph tumours, in particular, may enlarge during pregnancy, increasing the risk of PA and associated neuro-ophthalmological consequences such as the compression of the optic chiasma or cranial nerves. However, due to the physiological gestational increase in pituitary volume, PA may occur in patients without any underlying hypophyseal mass[4]. As during normal pregnancy, the pituitary gland volume increases up to 120% of its original size due to hyperplasia of the prolactin cells, and the metabolism of the pituitary gland undergoes significant changes as a result of placental hormone secretion.

The clinical syndrome of pituitary apoplexy is rare and is often misdiagnosed because of its highly variable clinical presentation[5]. The sudden increase in sellar contents compresses surrounding structures and portal vessels, resulting in sudden, severe headache, visual disturbances and impairment in pituitary function.

Pituitary apoplexy can be managed either by surgery or by conservative treatment. Conservative management requires immediate IV administration of high-dose glucocorticoids and hormone replacement therapy depending upon the site affected. After initial stabilization the patients who are on short-term follow up mainly presents with no visual deficit or evidence of early improvement in visual deficit, are ideal candidates for conservative therapy, as done in our case who presents with severe headache on 1st postoperative day.

### The Case

38 years G3P1101 at POG 35 weeks 5 days with history of previous lower segment cesarean section reported in labour room with antepartum haemorrage which was spontaneous, painless, fresh red in colour and mild to moderate in amount. She got admitted in there and further evaluated. At time of admission her vitals were stable and was managed as per protocol. On further evaluation she was found to be breech presentation with type 4 placenta previa. She was taken for emergency caesarean section on same day in view of continued antepartum hemorrhage. A preterm alive female child extracted out as footling breech. Baby cried on table immediately after birth with normal birth weight and APGAR.

During intraoperative period, she threw GTC seizure, which was managed by anaesthetists, anaesthesia converted to general anaesthesia and shifted to ICU for further care. Her postoperative BP was 180/110 and pulse rate 90/min, investigations as per protocol sent and she was put on $MgSo_4 7H_2O$ as per Pritchard regimen.

She complained severe headache and blurring of vision on postoperative day one. Medicine and ophthalmic cconsultations were taken. NCCT head and other investigations were carried out as per requirement. Her fundus and other cranial nerve examination were found normal.

On NCCT, there was evidence of hyper dense area seen in pituitary region measuring 10×9×7 mm with CT value of 51HU suggestive of pituitary hemorrhage. For further characterisation of lesion, MRI brain was done. There was pituitary gland measuring 8.8×12.5mm showing T1 hyperintense and T2 hypointense signal with blooming seen on GRE suggestive of hemorrhage of subacute stage suggestive of pituitary apoplexy (Figure no:1). She was put conservative management in consultation with endocrinologist and improved. She was discharged on D10 and advised further follow up in the department of endocrinology.

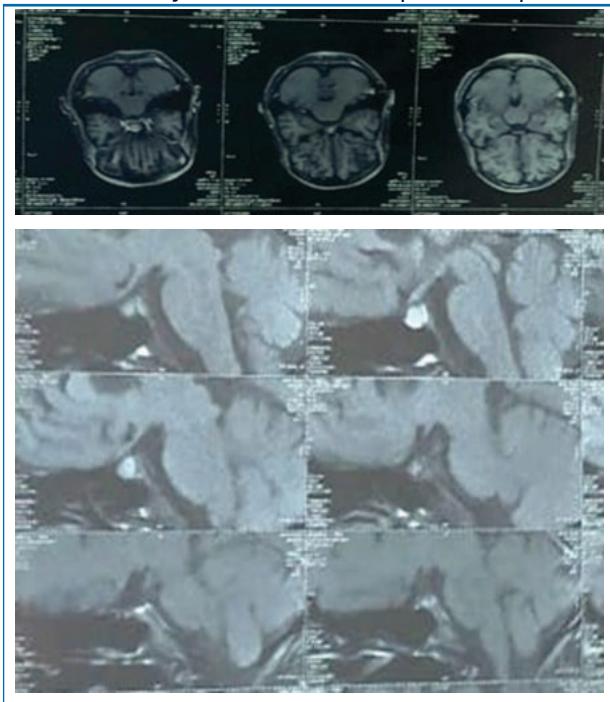

**Figure No. 1: MRI Brain Showing T1 Hyperintense and T2 Hypointense Signal Suggesting Subacute Pituitary Haemorrhage**

## DISCUSSION

Pituitary apoplexy is a rare medical emergency caused by the sudden infarction or hemorrhage of a pituitary adenoma. It is characterized by a rapid increase in pressure within the sella turcica, which can lead to a variety of neurological and endocrine complications. Pituitary apoplexy mostly occurs spontaneously, however precipitating factors can be identified in 10-40% of cases[6] includes sudden changes in blood flow within the pituitary gland, an imbalance between stimulation of the pituitary gland and increased blood flow within the pituitary adenoma, ant coagulated states[6], undergoing surgery[7 8], endocrine stimulation tests, hypertension and post-partum[9].

The most common presenting symptom of pituitary apoplexy is severe headache. Other symptoms may include: Diplopia (78%), Vomiting (69%), Visual field defects (64%), Impaired visual acuity (52%) and Altered level of consciousness [10]. Hypopituitarism is a common complication, and can manifest as panhypopituitarism, secondary hypothyroidism, secondary hypoadrenalism, or hypogonadism.

The diagnosis of pituitary apoplexy is based on clinical presentation and imaging findings. Magnetic resonance imaging (MRI) is the preferred imaging modality, as it can show the presence of a pituitary adenoma, hemorrhage, and/or edema[11]. The immediate management of pituitary apoplexy is focused on relieving the pressure within the sella turcica and preventing further neurological damage. This may involve: Fluid and electrolyte replacement , Steroid supplementation and Surgical decompression. The long-term management of pituitary apoplexy is focused on hormone replacement therapy for hypopituitarism.

Immediate medical management of patients with pituitary apoplexy includes a careful assessment of fluids and electrolyte balance, ensure hemodynamic stability, and replacement with corticosteroids[12.] All patients should receive corticosteroids even if they do not present symptoms of adrenal crisis. The recommended dose is an intravenous 100–200 mg bolus of hydrocortisone. Additional administration of 50-100 mg every 6 hours should be continued Emergency surgery should be reserved for patients with progressive deterioration of consciousness, hypothalamic involvement, and progressive visual worsening. It has been demonstrated that a significant postoperative clinical improvement is a consequence of a surgical procedure performed as soon as possible[13]. With prompt diagnosis and treatment, the prognosis for pituitary apoplexy is generally good. However, some patients may experience long-term neurological sequelae or hypopituitarism.

## CONCLUSION

Acute pituitary apoplexy is a rare unpredictable event and should be considered in postpartum patient with abrupt endo-neuro-ophthalmological deterioration. In such patients a high index of clinical suspicion is essential to diagnose this condition particularly in a setting where patient does not have any past history of pituitary related signs and symptoms. Prompt diagnosis and conservative management even without surgery may be life-saving.

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