



## Acute Subdural Hematoma in the Post Partum Period – A Case Report

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### Abstract

*Acute neurological syndromes are occasionally reported during pregnancy and in the postpartum period. They include preeclampsia, eclampsia, haemorrhagic or ischaemic stroke, cerebral sinus venous thrombosis, posterior reversible leuko encephalopathy syndrome and other neuropathies many of them are relatively benign and can be diagnosed in very early stage and they result in no neurological deficits. We report a case of 23 year old primi gravida who developed spontaneous acute bilateral subdural haematoma (SDH) on the 4<sup>th</sup> postoperative day which resolved spontaneously later.*

**Keywords:** *subdural haematoma, postpartum period, headache.*

### Introduction

Significant hormonal, physiological and physical changes occur in women during pregnancy and also in the postpartum period. A very small percentage of women are likely to develop certain neurological complications which are generally self limiting without progressing to severe neurological deficits. They usual complaints being progressive headache, blurring of vision and sometimes seizures. The most important neurological complication is progressive reversible leukoencephalopathy syndrome (PRES) which is due to ischaemic changes in the posterior circulation.

The MR findings of PRES are typical FLAIR/ T2 Weighted hyperintensities in the grey-white matter junction of bilateral parieto occipital and frontal lobes. The other most important condition seen in the postpartum period is cerebral sinus venous thrombosis. On CT and MR imaging there will be areas of cerebral edema and haemorrhages with loss of flow voids in dural sinuses. Being a hypercoaguable status, pregnant and postpartum patients are likely to develop cerebral ischaemia and haemorrhages due to accelerated hypertension. They usually present with acute stroke. Pregnancies can increase the risk of subarachnoid haemorrhage from the rupture of intracranial aneurysm. Idiopathic postpartum

cerebral angiopathy is a rare neurological condition seen in normotensive postpartum women causing stenosis of small and medium sized arteries. Other rare neurological diseases seen in pregnancy and postpartum period are pituitary apoplexy, Wernicke encephalopathy and Osmotic demyelination syndrome.

### Case Report

A 23 year old primigravida patient with term gestation was admitted and delivered a healthy baby on lower section Caesarian section under spinal anaesthesia. On third postoperative day the patient complained of severe progressive headache, vomiting and blurring of vision. Fundus examination was normal. There were no signs of imminent eclampsia. Routine biochemical tests, liver function tests and haematological tests for evidence of bleeding disorders were normal.

Haemoglobin 10.1 gm. RBC count 3.56 million. ul. Serum bilirubin 0.43mg/Dl. Alkaline phosphatase 50 U/L .Total protein 5.7 g/Dl, SGPT 13 U/L,SGOT 22U/L.

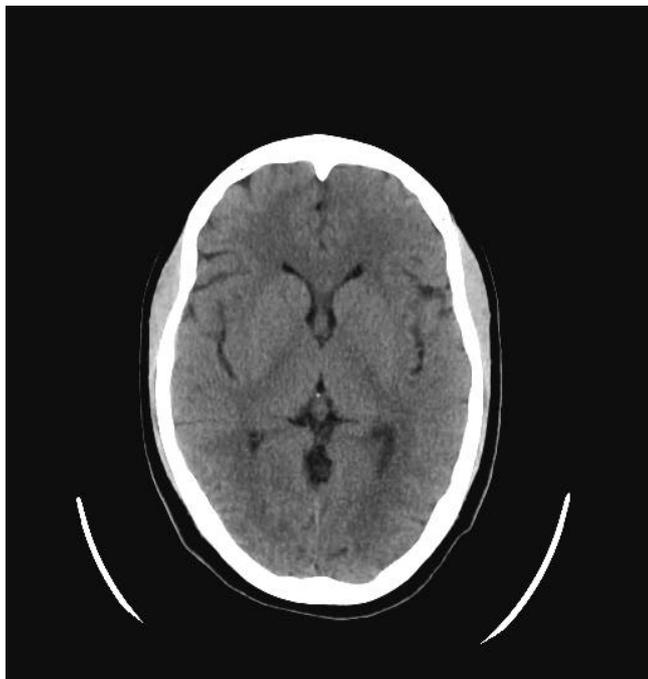
CT scan of brain without contrast administration showed acute subdural haematoma along the left frontoparietal convexity without causing mass effect. The haematoma extended along the interhemispheric fissure and left tentorium ( fig 1 and 2). The patient was put on Tab Levetiracetam 500 mg with supportive therapy and showed clinical improvement within one week. Repeat CT brain after one month showed complete resolution of subdural haematoma .( fig 3 )



**Fig: 1** non contrast CT brain show acute left fronto parietal convexity subdural haematoma with interhemispheric extension.



**Fig 2:** non contrast CT brain show acute left fronto parietal convexity subdural haematoma with interhemispheric extension.



**Fig: 3** Repeat CT brain after one month show complete resolution of haematoma

### Discussion

Intracranial hypotension is a well recognized complication following spinal anesthesia and epidural analgesia. On MR imaging intracranial hypotension appears as diffuse dural thickening with enhancement and associated prominent dural sinuses. Acute cerebral subdural haematoma following spinal anesthesia has been documented in the literature already by many authors<sup>1, 2</sup>. The probable explanation for the development of subdural haematoma following spinal anesthesia is due to the presence of intracranial hypotension causing downward displacement of brain resulting in extravasation of blood and formation of subdural haematomas.<sup>3</sup> Malitha Patabendige<sup>4</sup> reported a case of acute subdural haemorrhage in a 27 year old woman developed on 23<sup>rd</sup> postpartum date as a rare complication of HELLP syndrome due to development of thrombocytopenia. Due to thrombotic microangiopathy and severe hepatic dysfunction during pregnancy Saamia Yasin Wayhs and others<sup>5</sup> reported a case of fatal spontaneous subdural and intraparenchymal haemorrhage following caesarian section. A 26 year old female developed bilateral SDH with cerebral sinus

venous thrombosis simultaneously on the third day of epidural analgesia done for vaginal delivery<sup>6</sup>. In the present case there were no signs of eclampsia, fever, trauma and the patient was not hypertensive. There was no evidence of hepatic dysfunction or haematological disorder. The cause of bilateral SDH is likely attributed to the spinal anesthesia performed during C- section.

### Conclusion

Spontaneous subdural haematoma is one of the important causes of headache following the postpartum period if the patient undergoes delivery under spinal anesthesia.

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