

## Non-Traumatic Postpartum Subdural Hematoma: A Case Report of Probable Complication of Preeclampsia

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### 1. Abstract

Preeclampsia is a condition that affects nearly 8% of pregnant women, usually during the second half of pregnancy (from around 20 weeks) or soon after their baby is delivered. A spontaneous subdural hematoma associated with preeclampsia is extremely rare. The author is reporting in this article the case of a 32-year-old woman with 34 weeks of gestation, who sought treatment for high blood pressure, headache, and proteinuria. Nearly 6 weeks after a cesarean delivery of a stillborn baby, the patient developed headache and palsy of the left VIth cranial nerve. Magnetic resonance imaging revealed a left hemispherical subdural hematoma, with midline deviation.

### 2. Introduction

Preeclampsia is a multisystem disorder that complicates 3-8% of pregnancies and constitutes a major source of morbidity and mortality worldwide [4].

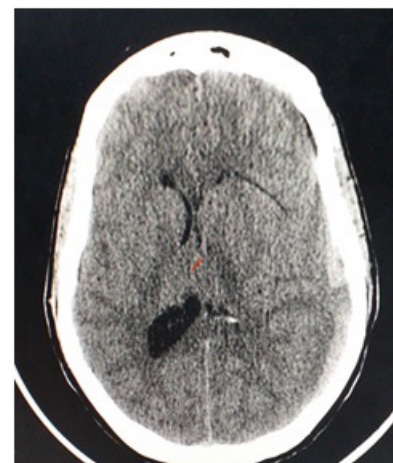
Intracranial hemorrhage is a rare complication during pregnancy, but potentially fatal. The main causes are ruptured aneurysm, arteriovenous malformations (MAV) and pregnancy-induced hypertension. Subdural hemorrhage associated with pregnancy has been reported in post trauma or as a complication of epidural anesthesia during labor. A spontaneous subdural hematoma associated with preeclampsia is considered as a rare condition, it has been reported in some cases in the literature.

### 3. Case Report

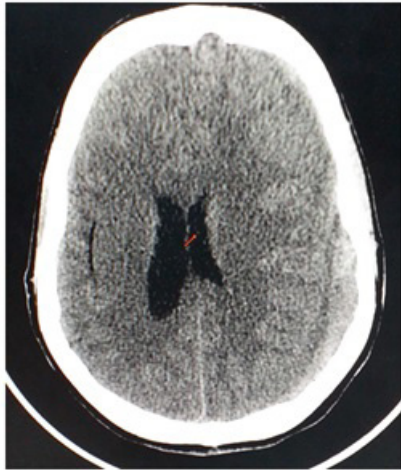
A 32-year-old gravida 3 para 2 patient with a history of cesarean delivery of a stillborn baby for preeclampsia six weeks ago was

referred to our department. She has had headache and visual disorders since the fourth week postpartum. On admission the patient was fully awake with a Glasgow Coma Scale at 15. Eye examination revealed a diplopia, a left ptosis and a left esotropia which means a palsy of the VIth cranial nerve. The cardiopulmonary examination was unremarkable. Laboratory studies included hemoglobin of 10.4g/l, platelet count 290000/mm<sup>3</sup>, serum glutamic oxaloacetic transaminase (SGOT):

30.4 IU/L, glutamic pyruvate transaminase (SGPT): 28.2IU/L, urea: 0.08g/l, créatinine: 9.46mg/l, total bilirubin: 0.7mg/dl. The brain CT Scan showed an 11.6mm left fronto-temporo-parietal chronic subdural hematoma with rebleeding marks, a 4.1mm midline deviation to the right and a subfalcine herniation (Figure 1 and 2).

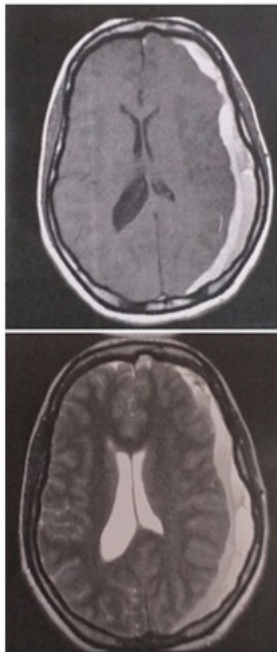


**Figure 1:** brain CT Scan demonstrating mixed density hematoma with hyperdense component.



**Figure 2:** brain CT Scan demonstrating a midline deviation.

The MRI showed a large subdural hematoma, T1 hyperintense, T2 and Flair hyperintense with a 7mm midline deviation (Figure 3).



**Figure 3:** MRI images showing a T1 and T2 hyperintense left subdural hematoma with midline deviation.

The patient was admitted on the same day in the operating room and the hematoma was evacuated by a left parietal burr hole. The evolution was marked by neurological improvement, the visual disorders disappeared.

Other cases of subdural hematoma have been reported in post-partum in association with epidural anesthesia [5].

Gregg Giannina and al described a subdural hematoma during pregnancy in a patient with preeclampsia without notion of trauma. The exact etiology of the hematoma in this patient is not clear. However, thrombocytopenia may have been a predisposing factor for the development of intracranial hemorrhage and / or the inhibition of platelet function due to magnesium sulphate [3].

In our case the patient had a normal count of platelet and did not receive magnesium sulfate before.

#### 4. Discussion

Intracranial hemorrhage is a rare complication occurring in 0.01-0.05% in pregnancies [2].

Subdural hematoma is a common condition, complicating around 1% of head trauma. Most cases occur after trauma, coagulopathy, dural metastases, meningiomas and aneurysms, and are extremely rare in the context of pregnancy and postpartum.

Some cases subdural hematoma resulting from a head injury during pregnancy has been reported [1].

#### 5. Conclusion

Subdural hematomas during pregnancy are rare, they should be considered in the differential diagnosis of headache in pregnancy and puerperium, especially when there is a focal neurological sign and/or thrombotic microangiopathy.

Possibly involving maternal and fetal prognosis, they must be detected early and treated effectively.

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