

# Cerebral Venous Sinus Thrombosis in Early Pregnancy : A Case Report

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## Abstract

*Cerebral Venous Sinus Thrombosis (CVST) in pregnancy is an uncommon condition and affects about 5 women per million. Actual etiology is difficult to confirm, a hypercoagulable state along with protein Sand C deficiency, hyperhomocystinaemia are the contributing factors. MRV like neuro imaging is the main stay of diagnosis. Treatment with Low molecular weight heparin throughout the pregnancy and post partum period can save the life of both mother and child.*

**Key words :** Sinus Thrombosis; Haemorrhagic stroke; Pregnancy.

## INTRODUCTION

Cerebral Venous Sinus Thrombosis (CVST) in pregnancy is an uncommon condition but has a propensity to cause substantial damage including fatal outcome, such as, haemorrhagic stroke<sup>1,2</sup>. It affects about five women per million<sup>3</sup>. Although the actual cause is not always known, there are many predisposing factors that may contribute to the development of Cerebral Venous Sinus Thrombosis (CVST). These include systemic hyper homocystinaemia, iron deficiency, folic acid deficiency, protein C and S deficiency<sup>4</sup>. Pregnant women are at greater risk due to their hyper coagulable state. The common presentations of cerebral venous sinus thrombosis are severe headache, seizure, visual disturbance, increase intra cranial pressure and focal neurological deficit. CVST in pregnancy demands a prompt and effective management strategy for maternal and foetal wellbeing<sup>5</sup>.

## CASE REPORT

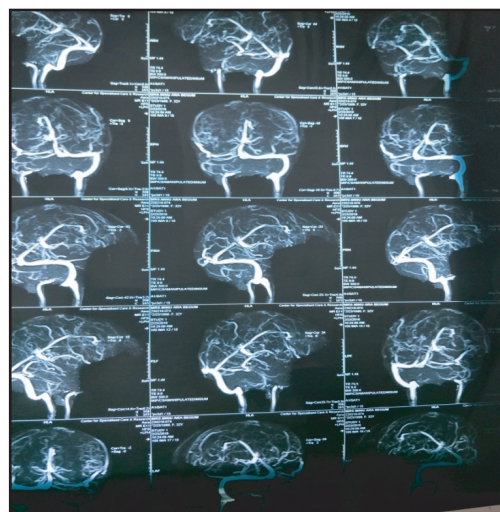
A 32 years old woman, para 2+0, P/H/O 2 LSCS, came at her 7 weeks of pregnancy with early symptoms and signs of pregnancy. Her physical examination was normal and she was treated with anti emetic drugs and folic acid supplement. After 2 weeks

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**Figure 1 :** Complete thrombosis of superior sagittal sinus

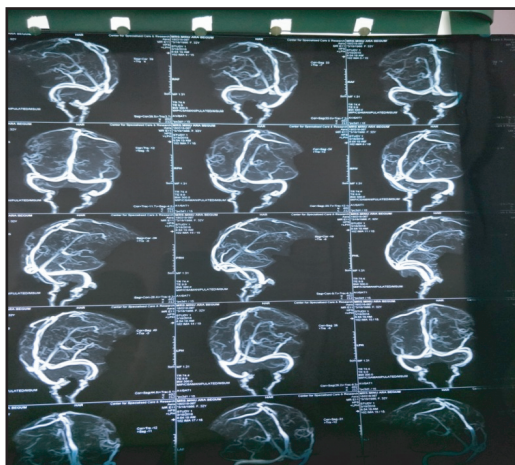
she presented with severe headache and neck pain with visual disturbance refractory to usual medication. A joint consultation of neurologist summoned. On examination the patient was oriented but anxious, normotensive and mildly anaemic. Ophthalmoscopy revealed papilloedema. Abdominal examination was normal. She was advised MRV of brain. But the very next day patient complained of complete blindness.

MRV revealed complete thrombosis of superior sagittal sinus. Haematology findings were normal other than protein S deficiency.

### TREATMENT

Patient was treated with low molecular weight heparin 60 mg twice daily, continued throughout pregnancy and stopped 24 hours prior delivery for a period of 48 hours. Acetazolamide 500mg twice daily and folic acid supplement. After 2 weeks of treatment patient improved clinically.

MRV repeated and found complete resolution of thrombus. Pregnancy continued and at 37weeks elective LSCS done. A healthy 3.2 kg male baby was delivered. Post partum period was uneventful.



**Figure 2 :** After treatment with heparin, complete clearance of thrombus

### DISCUSSION

CVST has a variety of clinical presentation ranging from severe headache to coma. The most common presentations include headache (97%), seizure attack (47%) and paresis (43%)<sup>6</sup>. Women are more commonly affected than men with a ratio of 1.29:1 and it is much greater in pregnancy and post partum period<sup>7</sup>. Mortality associated with CVST in pregnancy reported about 7%<sup>8</sup>. Cause of CVST in pregnancy remains unknown in 20%-25% even after extensive investigation. The most common pathogenesis include hypercoagulable state like pregnancy and puerperium<sup>9</sup>. Anti thrombin III deficiency, protein C and S deficiency, folic acid deficiencies are the other common causes. Neuro imaging like MRI and MRV remain the corner stone of investigation. Treatment of CVST in early pregnancy includes thrombolytics, anticoagulants and if needed surgical thrombectomy. Anti coagulant therapy require to continue throughout the pregnancy and post partum period with a small pause in delivery time. Outcome may vary from total recovery to death. Recurrence rate of CVST in future pregnancy is low<sup>10</sup>.

### CONCLUSION

Pregnancy and post partum period is a high risk phase for innumerable complications in a woman's lifetime. Significance of careful evaluation of headache and seizure in pregnancy and importance of interdisciplinary approach is quite high. Investigation like MRI or MRV along with low molecular weight heparin treatment in CVST in early pregnancy can save the life of both mother and child.

### DISCLOSURE

The author declared no competing interest.

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