Cerebral venous thrombosis in pregnancy after spinal and epidural blood patch dural puncture

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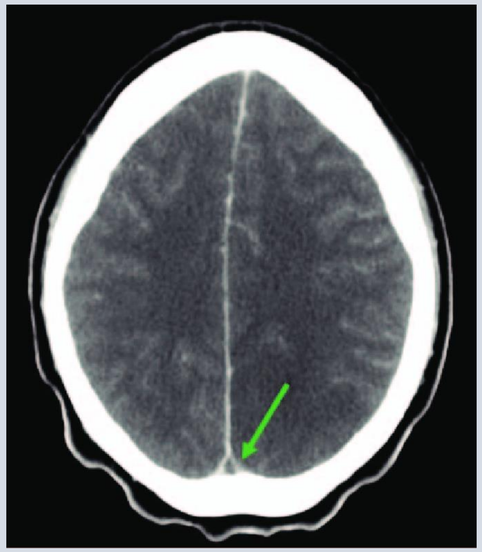
Introduction

Cerebral venous thrombosis (CVT) is rare but can lead to morbidity and mortality. Pregnancy, postpartum and dural puncture are risk factors. We describe a CVT 11 days post spinal anaesthesia and 7 days post dural puncture during epidural blood patch.

Case Report

A 31 year old, para 1, 38+4 weeks gestation received a spinal for an elective caesarean section. Past medical history of asthma, ex-smoker and emergency section under general anaesthetic. Multiple attempts required with a 25G sprotte needle. 2.5mls of heavy bupivicaine + 0.3mg diamorphine was used. Block to cold was T4 and the operation was uneventful. She was discharged on day 2 post-op but readmitted day 3 due to a postural fronto-occipital headache. Post dural puncture headache (PDPH) was diagnosed. She suffered a dural tap during epidural blood patch. The headache worsened and conservative treatment was given. She was discharged after 6 days headache resolved. A different frontal headache developed with intermittent right sided paraesthesia of face, arm, back and leg associated with motor weakness in right hand. MRI venogram demonstrated a left cortical vein thrombosis and a filling defect in the superior sagittal sinus possibly indicating another thrombus. Blood tests were normal. She was discharged on warfarin, aiming for INR 2-3 with S/C enoxaparin as bridging. Intermittent tingling in right hand remained.





Discussion

CVT in pregnancy is estimated at 11.6 cases/100,000 deliveries. Most occur in the 3rd trimester or postpartum. Increased risk is attributed to the hypercoagulability in pregnancy, venous stasis and decreased mobility. Headache is seen in 90% of cases. Other features are seizures, focal neurological deficit, intracranial hypertension and cranial nerve syndromes[1]. Difficulties in diagnosis occur due to its rarity and its clinical manifestations which depend on thrombus site and any raised intracranial pressure. CVT may therefore mimic other conditions such as PDPH post neuroaxial anaesthesia. A causal relationship is difficult to establish but the proposed mechanism is reduced pressure and volume of the cerebral spinal fluid leading to dilation and increased volume of the venous system[2]. Reduced blood flow causing venous stasis may lead to thrombus formation. There is a need for prompt radiological investigation for headaches post neuro-axial anaesthesia that are no longer postural, change in nature or associated with abnormal neurology to investigate for CVT.

References

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