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Research Paper

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Isolated Thrombosis of Vein of Trolard Presenting As Acute Subarachnoid Hemorrhage

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ABSTRACT

Isolated CVT without dural sinus involvement is very rare and presentation as sub arachnoid haemorrhage is even rarer. We report the case of a 28 year old postpartum lady who presented to us with headache. On evaluation, she was found to have an acute subarachnoid hemorrhage secondary to isolated thrombosis of the vein of Trolard.

CASE REPORT:

A 28-year-old woman 3 days postpartum with no significant past history and an uneventful pregnancy and normal vaginal delivery was referred to our department with the suspicion of sepsis and she also had complaints of bifrontal headache since 2 days. Her vital signs and neurological examination were unremarkable. Her routine blood workup was normal and showed no evidence of sepsis. Computed tomography (CT) of the brain done for the evaluation of headache showed an extra-axial hyperdensity of blood attenuation along the left frontal and high parietal sulci suggestive of an acute subarachnoid hemorrhage (Figure 1). Magnetic resonance imaging (MRI) revealed an extra axial focal tubular lesion which was hyperintense on T1-weighted (Figure 2) with blooming on susceptibility weighted imaging (SWI) (Figure 3) in the left high frontal region. MR venography (Figure 4) showed a filling defect in the left parasagittal region corresponding to the left vein of Trolard suggesting a thrombosis. The major dural sinuses and deep veins were all patent.

Cerebral venous thrombosis (CVT) may involve dural venous sinuses and/or cortical and deep veins of the brain. Cerebral venous sinus thrombosis is an uncommon form of stroke and occurs in 0.5-1% of all patients presenting with a stroke syndrome. [1] The common predisposing factors for CVT are infections, pregnancy, dehydration, coagulopathies, medications like oral contraceptives, steroids and anti phospholipid syndrome.

Isolated CVT without dural sinus involvement is very rare and confined to a few case reports. Of these, isolated thrombosis of the vein of Trolard has been rarely reported. The vein of Trolard also known as superior anastomotic vein is the largest cortical vein which interconnects middle cerebral vein with superior sagittal sinus.

Sub cortical haemorrhage can be seen on MRI in 38% of patients with CVT.[2] Sub arachnoid haemorrhage (SAH) is seen in a rare subgroup of these patients. The mechanism by which isolated cortical vein thrombosis causes subarachnoid haemorrhage is unknown but may probably be due to rupture of a congested collateral vein.[3] The presence of cortical SAH might be an early sign of underlying CVT as was suspected and investigated for in our patient. MRI with MR Venography is the gold standard for diagnosis of CVT. Therapy with anticoagulation in the presence of haemorrhage remains controversial. But as is generally accepted, our patient was started on therapy with anticoagulants and is doing fine.

CONCLUSIONS:

Headache should be actively investigated for in any patient with a predisposing factor as it is the most common presentation of CVT. The presence of acute SAH of the convexity of brain should prompt careful and extensive imaging of the dural venous sinuses along with the intracranial arteries.

FIGURES:

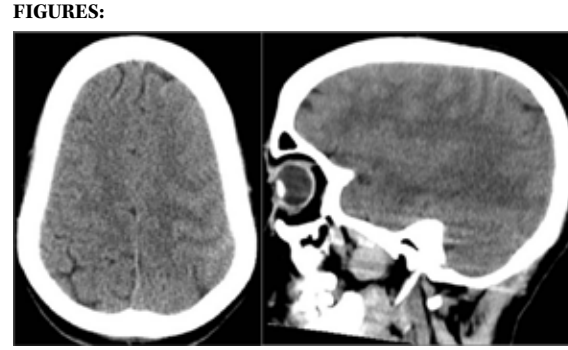

Figure 1: Plain CT of the brain done showing an extra-axial hyperdensity of blood attenuation along the left frontal and high parietal sulci suggestive of an acute subarachnoid hemorrhage.

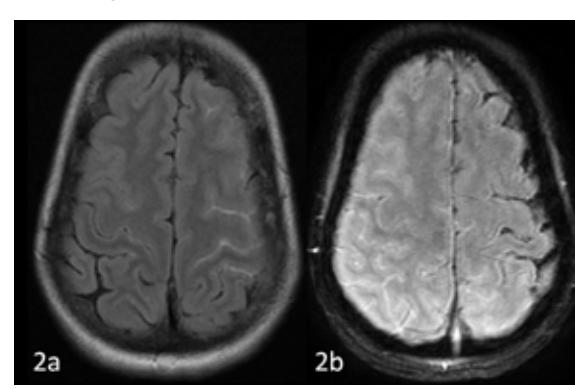

Figure 2: MRI of the brain showing linear sulcal hyperintense signals along frontal, parietal, occipital and left temporal lobe on T1-weighted images (figure 2a) with blooming on susceptibility weighted imaging (SWI) (figure 2b) suggestive of an acute subarachnoid hemorrhage.

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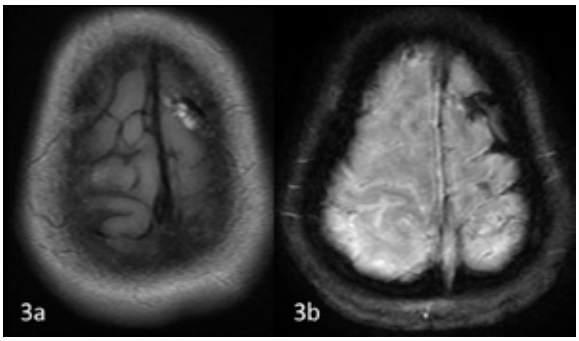

Figure 3: MRI of the brain showing an extra axial focal tubular lesion which is hyperintense on T1-weighted (figure 3a) with blooming on SWI (figure 3b) in the left high frontal region.

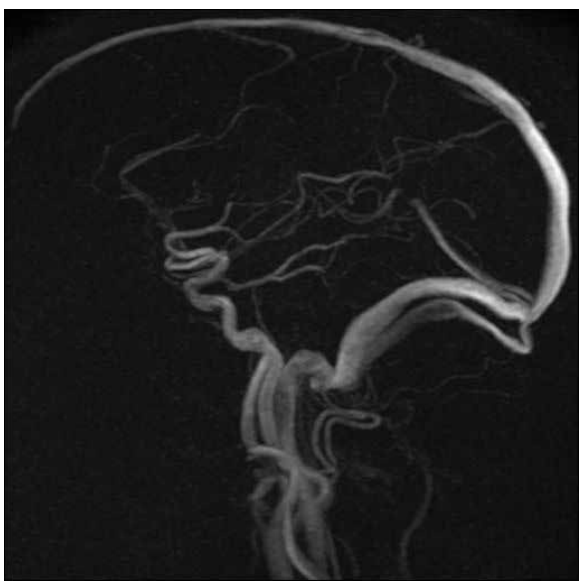

Figure 4: MR venography showing a filling defect in the left parasagittal region corresponding to the left vein of Trolard suggesting a thrombosis.

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