

A Rare Case of Dissection of Cervical Portion of Internal Carotid Artery, Diagnosed Postpartum

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Abstract : Postpartum dissection of the internal carotid artery is a relatively rare condition and is considered as an underlying aetiology in 5% to 25% of strokes under the age of 30 to 45 years. However, 86% of these cases recover completely and 14% have mild focal neurological symptoms. Prognosis is generally good with early intervention. The risk quoted for a repeat carotid artery dissection in subsequent pregnancies is less than 2%. 36-year Caucasian primipara presented on postnatal day one of forceps delivery with tachycardia. In the intrapartum period she had a history of prolonged rupture of membranes and developed intrapartum sepsis and was treated with antibiotics. Postpartum ECG showed septal inferior T wave inversion and a troponin level of 19. Subsequently Echocardiogram ruled out post-partum cardiomyopathy. Repeat ECG showed improvement of the previous changes and in the absence of symptoms no intervention was warranted. On day 4 post-delivery, she had developed symptoms of droopy right eyelid, pain around the right eye and itching in the right ear. On examination, she had developed right sided ptosis, unequal pupils (Rt miotic pupil). Cranial nerve examination, reflexes, sensory examination and muscle power was normal. Apart from migraine, there was no medical or family history of note. In view of Horner's on the right, she had a CT Angiogram and subsequently MR/MRA and was diagnosed with dissection of the cervical portion of the right internal carotid artery. She was discharged on a course of Aspirin 75mg. By 6 week post-natal follow up patient had recovered significantly with occasional episodes of unequal pupils and tingling of right toes which resolved spontaneously. Cervical artery dissection, including VAD and carotid artery dissection, are rare complications of pregnancy with an estimated annual incidence of 2.6-3 per 100,000 pregnancy hospitalizations. Aetiology remains unclear though trauma during straining at labour, underlying arterial disease and preeclampsia have been implicated. Hypercoagulable state during pregnancy and puerperium could also be an important factor. 60-90% cases present with severe headache and neck pain and generally precede neurological symptoms like ipsilateral Horner's syndrome, retroorbital pain, tinnitus and cranial nerve palsy. Although rare, the consequences of delayed diagnosis and management can lead to severe and permanent neurological deficits. Patients with a strong index of suspicion should undergo an MRI or MRA of head and neck. Antithrombotic and antiplatelet therapy forms the mainstay of therapy with selected cases needing endovascular stenting. Long term prognosis is favourable with either complete resolution or minimal deficit if treatment is prompt. Patients should be counselled about the recurrence risk and possibility of stroke in future pregnancy. Coronary artery dissection is rare and treatable but needs early diagnosis and treatment. Post-partum headache and neck pain with neurological symptoms should prompt urgent imaging followed by antithrombotic and /or antiplatelet therapy. Most cases resolve completely or with minimal sequelae.

Keywords : postpartum, dissection of internal carotid artery, magnetic resonance angiogram, magnetic resonance imaging, antiplatelet, antithrombotic

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