Bilateral vertebral artery occlusion with retrograde basilar flow in three cases of giant cell arteritis


Vertebrobasilar ischaemia is a rare life-threatening complication in giant cell arteritis (GCA). We report three patients with bilateral vertebral artery occlusion. Neurovascular imaging, including CT-angiography, MR-angiography and colour-coded duplex sonography revealed flow reversal in the basilar artery as well as inflammation of the vertebral vessel wall. The first patient died from massive brainstem infarction, the other two patients survived the initial inflammatory phase of GCA. No stroke recurrence at 12 months' follow-up on warfarin and steroid treatment was observed. Bilateral distal vertebral artery occlusion and retrograde basilar artery flow persisted. Outcome in these patients is dependant on potent immunosuppression, concurrent atherosclerotic steno-occlusive disease and presence and/or rapid development of sufficient collateral pathways into the vertebrobasilar circulation. The identification of patients with high risk of ischaemia due to compromised vertebrobasilar flow may be important to select adjunct treatment to immunosuppression, such as anticoagulation in GCA.

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