LECTURE

Vertebrobasilar stroke

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Abstract

The Vertebrobasilar (VB) vascular system comprises the vertebral, basilar and posterior cerebral arteries and their branches. It feeds the posterior region of the brain, including the brainstem, the thalamus, the cerebellum and areas of the occipital and temporal lobes, representing about 20% of the cerebral blood flow.

It is estimated that 20 to 25% of all transient ischaemic attacks (TIA) and strokes occur in the VB vascular territory and the annual adjusted incidence of posterior circulation stroke was estimated as 18 per 100 000 person-years in an Australian study.

VB stroke remains more difficult to recognize when compared to other stroke types. Due to the vast cerebral territory it supplies, VB ischaemia can present with a wide range of symptoms and signs, sometimes overlapping with carotid circulation stroke. Most common symptoms include dizziness, vertigo, double vision, ataxia, numbness and weakness. As for signs, the most commonly observed are limb weakness, oculomotor palsies, ataxia and oropharyngeal impairment. However, rather than an isolated symptom, VB stroke classically presents as a cluster of signs and symptoms, reflecting the ischaemic area.

Brain computed tomography (CT), usually performed as an initial imaging modality, has a suboptimal visualization of the posterior fossa, making VB stroke an even more challenging diagnosis to the attending physician. Hence, awareness of the posterior fossa anatomy and of the classical VB ischaemia presentations might facilitate early recognition of this disorder, preventing death and disability in these patients.

Our aim is to make a comprehensive review of the anatomy, clinical presentation and aetiology of VB stroke.

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