A case of missed diagnosis of posterior circulation stroke

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Aims

Posterior circulation stroke (PCS) accounts for 20–25% cases of the ischaemic strokes in the UK each year. The posterior brain structures are supplied by the vertebrobasilar artery. Early recognition of PCS or transient ischaemic attack prevents disability and saves lives; but it can be more difficult to recognise and treat effectively than other stroke types. The following case explores a patient presenting with nausea, vomiting and weakness who was subsequently diagnosed with a PCS.

Methods

A 39-year-old right-handed woman presented to the emergency department at 12.30 with generalised weakness and vomiting. Initial triage found the patient to be FAST (face arm speech test) negative. She was therefore categorised as a non-urgent patient.

She was reviewed at 15.10. She was immobile on the trolley. She had had three episodes of vomiting at 10.30 on that day, following which she had a gradual onset of occipital headache, generalised weakness and was progressively aphasic and dysarthric. The only past medical history of note was ulcerative colitis, for which she was taking azathioprine and prednisolone.

Results

On clinical examination, the patient had horizontal nystagmus and reduced power in both the right upper and lower limbs. A diagnosis of PCS was suspected, though she did not have any risk factors except obesity. An urgent computed tomography (CT) angiogram was ordered and the stroke team was alerted. The scan showed occlusion of the right distal vertebral artery and stenosis of the left vertebral artery at the C2/C3 level. Magnetic resonance imaging (MRI) of the brain confirmed an acute infarction within the right medulla.

Conclusions

Due to the delay in diagnosis, she could not be thrombolysed as she was out of the 4.5-hour window. She is now slowly recovering with rehabilitation; however, her disability may have been prevented with earlier diagnosis.

Clinical lessons: FAST is a useful tool for anterior circulation stroke, with a sensitivity of 90%. However, in PCS, its sensitivity is only 60%. The question is, should other tools like the ROSIER scale (rule out stroke in the emergency room) be used instead of just FAST in the emergency or prehospital settings?

Given the subtle presentations of a PCS, perhaps senior review of FAST-negative patients at triage is crucial so as not to miss the critical thrombolysis window.■

Conflict of interest statement

The author has no conflict of interest to declare.

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