

Images in neuroscience

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A 44-year-old male presented with transient episodes of sudden onset dysarthria, vertical diplopia and quadriparesis lasting 1–2 min. These symptoms started one week prior to hospital admission and occurred daily. There was no other past medical history and he was not on regular medication. On examination, BP was 120/80, pulse 80, sinus rhythm and there were no focal neurological deficits. Routine blood tests and CT brain scan were normal. T2-weighted MRI (Fig. 1), DWI imaging (Fig. 2) and cerebral angiogram films (Figs. 3 and 4) are shown.

WHAT IS THE MOST LIKELY DIAGNOSIS?

1. Demyelinating disorder
2. Cerebral vasculitis
3. Vertebral artery dissection
4. Seizures secondary to encephalitis
5. Brain stem glioma



Fig. 1. T2-weighted axial MRI.



Fig. 2. DWI axial MRI.



Fig. 3. Lateral vertebral angiogram.



Fig. 4. AP vertebral angiogram.

ANSWER: (3) VERTEBRAL ARTERY DISSECTION

On further questioning, the patient stated that he was performing neck exercises for neck stiffness when the first symptoms occurred. His first symptom was sharp neck pain, followed by the transient neurological episode. Vertebral artery dissection was suspected clinically and he was commenced on heparin infusion. His presenting symptoms preceded by neck exercises have been described with spontaneous vertebral artery dissection.¹

The MRI images are consistent with bilateral acute pontine infarcts. The cerebral angiogram shows bilateral vertebral artery

dissections. He did not experience any further symptoms on heparin infusion, and was discharged on warfarin therapy for 3 months. The optimal treatment for cervical artery dissection is uncertain, although anticoagulation is widely used.²

REFERENCES

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2. Hankey GJ, Lyrer P, Engelter S. Antithrombotic drugs for carotid artery dissection. *Stroke* 2004; 35: 613–614.