



A Case of the Spins

David Yue, MD

Mike, 34, complains of sudden onset of headaches and vertigo since moving a 40-lb carpet with a co-worker two days ago. He says he wasn't lifting the carpet, but was just turning his head when symptoms began. He has had constant frontal headaches and vomited three times in the last 48 hours.

He mentions having some photophobia and is unable to walk straight. He denies any head trauma and has been unusually tired since the incident. His past medical and surgical history are unremarkable, except for hypothyroidism treated with levothyroxine sodium. He is a non-smoker.

Results of Mike's exam are listed in Table 1.

What's your diagnosis?

- a) Multiple sclerosis
- b) Cerebral vascular accident
- c) Vertebral artery dissection
- d) Subarachnoid hemorrhage

Table 1

Exam results upon presentation

- Alert
- Blood pressure: 110/90 mmHg
- Pulse: 96 beats/minute and afebrile
- Neurologic exam: Normal CNS II-XII
- PERLA and funduscopic exam: Normal
- Tympanic membranes: Unremarkable
- Photophobic
- No nystagmus
- Neck: Supple, but range of motion reproduced vertigo
- Muscle strength: Equal and bilateral
- Reflexes: Symmetrical and equal
- Plantar responses: Downgoing
- Gait: Slightly unsteady
- Cardiothoracic exam: Normal breath and heart sounds
- No carotid bruits

CNS: Central nervous system

PERLA: Pupils equal, react to light and accommodation

Answer:

Vertebral artery dissection

Mike is referred to the emergency department (ED) for immediate assessment. His blood work at the ED is normal (Table 2).

A computed tomography scan of the head is performed to rule out a subarachnoid bleed. It is normal.

A neurologist is consulted, as Mike's history is suggestive of a vertebral artery dissection. An urgent magnetic resonance imaging angiography is obtained. A small irregularity is noted within the proximal vertebral artery, which could represent small subintimal dissection. This dissection is not flow-limiting and there is no evidence of a brain infarct.

Mike is sent home and is to be followed up with the neurologist. He is started on enteric-coated acetylsalicylic acid, 325 mg daily, and a stool softener. He is told not to engage in any strenuous activities. **Dx**

Table 2

Mike's blood work results

- Complete blood count/differential: Hgb at 171g/L
- White blood cell count: $9.0 \times 10^9/L$
- Blood sugar: 4.5 mmol/L
- Sodium: 143 mmol/L
- Potassium: 3.9 mmol/L
- Chloride: 108 mmol/L
- Creatinine: 83 $\mu\text{mol/L}$
- Urea: 3.9 mmol/L
- Prothrombin time: INR—1.0
- PTT: 23 seconds

Hgb: Hemoglobin
INR: International normalized ratio
PTT: Partial thromboplastin time

Dr. Yue is a general practitioner, Edmonton, Alberta.

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Our mailing address:	Our fax number:
955 boul. St-Jean,	(514) 695-8554
Suite 306	
Pointe Claire, Quebec	Our e-mail address:
H9R 5K3	diagnosis@sta.ca