



## A case of migraine-like presentation secondary to vertebral artery dissection

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### Introduction

Vertebral artery dissection (VAD) is an uncommon cause of stroke in the general population and a common cause of stroke in patients younger than 45 of age. VAD occurs when a tear of the vessel wall compromises its structure, leading to arterial blood dissecting between layers of the arterial wall. VAD can develop spontaneously or be triggered by traumas to the neck. Headache is a common presentation in VAD and can be isolated or associated with other neurological signs. VAD-related headaches have no specific symptoms and sometimes might be confused with other forms of headache. VAD can mimic migraine typical symptoms, leading to a failed therapy until properly diagnosed. Herein, we reported a rare case of VAD mimicking a migraine-like presentation in a young woman.

### Objective

Report and discuss a rare case of VAD causing migraine-like presentation.

### Case report

A 38-year-old female was admitted with a sudden intense right frontal pulsatile headache, associated with nausea and intermittent dysphagia, after practicing intense physical exercise. Initial neurological exam showed right eyelid ptosis and right hemiface paresis, without any visual, pupillary or motor deficit. The patient has had chronic migraines since she was eleven years old and they became more frequent in the last year, with a different pattern in the past month. There was a family history of migraine with her mother and her five siblings presenting the same condition. A computed tomography (CT) scan did not show any acute cerebral injuries. Brain CT angiography revealed occlusion of the right vertebral artery. Magnetic resonance angiography imaging showed hematoma in the right vertebral wall compatible with dissection of the V4 segment without medulla infarction. The presentation of symptoms was consistent with incomplete Wallenberg syndrome due to a transitory compromising of brainstem structures and causing neurological impairments. Despite the neurological deficits and the dissection, the patient recovered completely from the symptoms, confirming a transient ischemic attack of medulla oblongata.

### Conclusion

The possibility of vertebral artery dissection should be considered in the differential diagnosis of severe secondary headaches especially after physical exercise. The prognosis for patients with VAD will depend on the size, location, and time of the region affected by ischemia. Although rare, VAD mimicking migraine is a serious condition and clinicians should be aware of this presentation for an early diagnosis and proper management.

**Keywords:** Vertebral Artery Dissection; Case Report; Migraine.