

## VERTIGO AS A SYMPTOM OF VERTEBROBASILAR ARTERY DISSECTION

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**Introduction/Objectives:** Although acute vertigo is a very common symptom, in some patients, it is very difficult to distinguish between peripheral and central origin. In most cases, isolated vertigo has a peripheral origin, but serious problem is that potentially life-threatening ischemic, hemorrhagic and inflammatory diseases of the central nervous system may cause identical symptoms, making it difficult to differentiate between them. Spontaneous vertebral artery dissection (VAD) can cause a medullary or cerebellar infarction initially presenting as acute vertigo as the only symptom.

Artery dissections (AD) are defined by the presence of a mural hematoma located in the arterial wall. A combination of an underlying arteriopathy and a more or less trivial precipitating event (such as trivial neck trauma or previous infection) is likely the mechanism of spontaneous craniocervical AD. In case of VAD, the role of preceding minor cervical trauma is explained by anatomic features of the vertebral artery which is anchored to the cervical spine making it more vulnerable to mechanical trauma. The clinical presentation of VAD can sometimes appear benign in cases of isolated head and/or neck pain or acute vertigo episode. Nevertheless, dissections are a major cause of ischemic stroke in young and middle-aged adults. Early recognition and appropriate management of this disorder are therefore of great importance.

**Participants, Materials/Methods:** We analyzed 40 consecutive stroke patients with spontaneous VAD treated in Stroke Unit of Clinical Center of Serbia in period from June 2006 to November 2011. The data used in the analysis were obtained from the Research protocol about craniocervical AD which is conducted in our Department. Information

were collected on patients demographic characteristics, clinical presentation, baseline stroke severity, risk factors and localization of VAD.

**Results:** From 40 analyzed patients there were 31 men (77.5%). The mean age at the time of occurrence of VAD was  $43.6 \pm 11.4$  years, range 18-68 years. The median baseline NIHSS score was 7 (IQR from 5 to 10), range from 0 to 30 points. Acute vertigo syndrome was present in 27 patients (67.5%). In ten patients (25%) episodes of vertigo were the initial symptom of VAD, preceding 1-3 days of the occurrence of limb weakness or other sign and symptoms of IS and in seven of them vertigo syndrome was associated with severe occipital headache and/or neck pain.

The V2-V3 segment of vertebral artery was most often the site of dissection and was recorded in 40% of patients, while intracranial location with propagation to basilar artery was recorded in 32% of patients. Nine patients (22.5%) reported to have had some kind of preceding trivial neck trauma (hyperextension of neck, abrupt neck movement, rigorous physical activity).

**Conclusions:** Acute vertigo syndrome accompanied by neck pain and occipital headache should alert physicians to a potential diagnosis of VAD.

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