Evaluation of Pain in Vertebral Artery Dissection

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Commentary

Vertebral Artery Dissection (VAD) is an important cause of stroke in the young adult frequently under diagnosed, as symptoms are various and subtle in their early manifestation [1]. VAD might be asymptomatic at onset in almost 50% of cases, but when symptoms are present, they mainly consist in local posterior neck pain and occipital cephalalgia, associated or not to other neurological symptoms ranging from cranial nerves deficit, to dizziness, postural instability, syncope, and peripheral neurological deficit [1-3]. Following this misleading clinical presentation, a high risk of early cerebrovascular complications (e.g., transient ischemic attacks, and stroke) is reported [4-6], probably due to an artery-to-artery mechanism [7]. The risk of stroke after VAD is higher during the first 2 weeks following the dissection, and then becoming significantly decreased [8]. As a consequence, the early diagnosis of VAD is essential to correctly address the therapeutic strategies, minimizing the complications [9]. This early diagnostic phase based on rapid recognition of symptoms (when present) is crucial, particularly if we consider VAD as a condition asymptomatic at presentation, becoming symptomatic later [1].

The term “stroke chameleons” is currently employed to describe a heterogeneous group of conditions that do not initially appear to be due to cerebrovascular accidents [10]; however, they are found to be strokes after additional investigation [11-16]. Almost 1% of strokes showed the whole disappearance of the hematoma. The hematoma can been erroneously interpreted as a manifestation of a cervical disc prolapse, also easily detectable in young patients. The acute onset and no improvement after pharmacological therapy, would have been detected, and the acute C5 motor deficit would have been asked only for standard cervical MRI, no hematoma diagnosis different from a common discopathy. Second, if neurologists would have been asked only for standard cervical MRI, no hematoma would have been detected, and the acute C5 motor deficit would have been erroneously interpreted as a manifestation of a cervical disc prolapse, also easily detectable in young patients. The hematoma can be displayed only with a fat saturation MRI exam that in our case was expressively asked by the neurologist.

There were two clinical pitfalls when dealing with the present case. First, when considering a continuous and persistent pain, with acute onset and no improvement after pharmacological therapy, neurologists should take into account also possible alternative diagnosis different from a common discopathy. Second, if neurologists would have been asked only for standard cervical MRI, no hematoma would have been detected, and the acute C5 motor deficit would have been erroneously interpreted as a manifestation of a cervical disc prolapse, also easily detectable in young patients. The hematoma can be displayed only with a fat saturation MRI exam that in our case was expressively asked by the neurologist.

We know that VAD is a well-known cause of an acute and persistent headache or cervical pain (IHS, 2013), but rarely it has been described also as a cause of isolated radiculopathy [17,18]. We suggest the importance to keep in mind VAD as a possible causal factor of “radiculopathy” in young individuals without a personal history of discopathy or with predisposing factors. The diagnosis of VAD is achieved with difficulty in a patient with isolated headache.


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or cervical pain in the Department of Emergency, and at this purpose the International Classification of Headache Disorders-beta version (HIS, 2013), might be a valid tool for clinicians to improve diagnostic sensitivity, as previously suggested by Schytz et al. [18]. We finally recommend that Fat saturation MRI sequences should be performed in selected cases, to exclude cervical artery dissection as part of the clinical-diagnostic workup of a patient with suspected cervical radiculopathy, when standard MRI do not show any disc hernia or prolapse.

Future prospective studies on large samples of patients with VAD are warranted to better assess the clinical features and all the possible future therapeutic strategies specific for this disorder.

References