



Pain as an alarm signal in cervical carotid dissection: report of a case with catastrophic evolution

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Abstract

Background

Cervical carotid dissection is a commonly reported arteriopathy and is associated with stroke in young, healthy patients.

Case report

The authors present a case of a woman with pain of recent onset secondary to a dissection of the cervical segment of the carotid artery on the same side and that evolved with stroke.

Conclusion

The diagnosis of arterial dissection is based on clinical suspicion and angiographic images of the encephalic vessels.

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Introduction

Cervical carotid dissection is a commonly reported arteriopathy and is associated with stroke in young, healthy patients.¹ Cases of patients who seek a medical emergency with recent and lateralized pain in the head and neck segment are not rare, and their symptoms are not thoroughly evaluated.^{2,5} The authors present a case of a woman with pain of recent onset secondary to a dissection of the cervical segment of the carotid artery on the same side. Although she sought an emergency and being evaluated by neuroimaging, the diagnosis was not suspected. As a result, there was a dramatic evolution with a stroke in the territory of the middle cerebral artery due to thromboembolism.

Case Report

A 48-year-old woman with a medical history of neck pain radiating to the occipital region on the right side for two weeks was admitted to the Hospital Esperança, Recife, Brazil. It was a continuous, non-pulsating pain of mild to moderate intensity. The pain came after going to the hairdresser, where she stayed for more than 60 minutes with her neck hyperextended. She sought a hospital emergency one week after the onset of the pain, performed a computed tomography scan of the skull, which was considered normal, and was discharged. Eight hours before the present admission (two weeks after the beginning of the pain), she presented a sudden severe motor deficit of the left limbs and paralysis of the left hemiface.

The medical management was initially conservative. A head computed tomography scan showed slight edema in the right cerebral parenchyma without deviation of the midline structures (Figure 1A). Twenty-four hours later, the patient became drowsy, and a new CT scan of the skull showed considerable edema (hypodensity) in the right cerebral hemisphere involving the middle cerebral artery territory, now with a significant deviation of the structures located in the midline (Figure 1B).

Angiography of the encephalic vessels was also performed, showing a dissection of the right carotid artery and occlusion of the right middle cerebral artery in the M1 segment (Figure 1C). A decompressive craniectomy was indicated, which was performed immediately. There was an improvement in the level of consciousness, and the patient was discharged three weeks later with left hemiplegia but lucid and oriented.

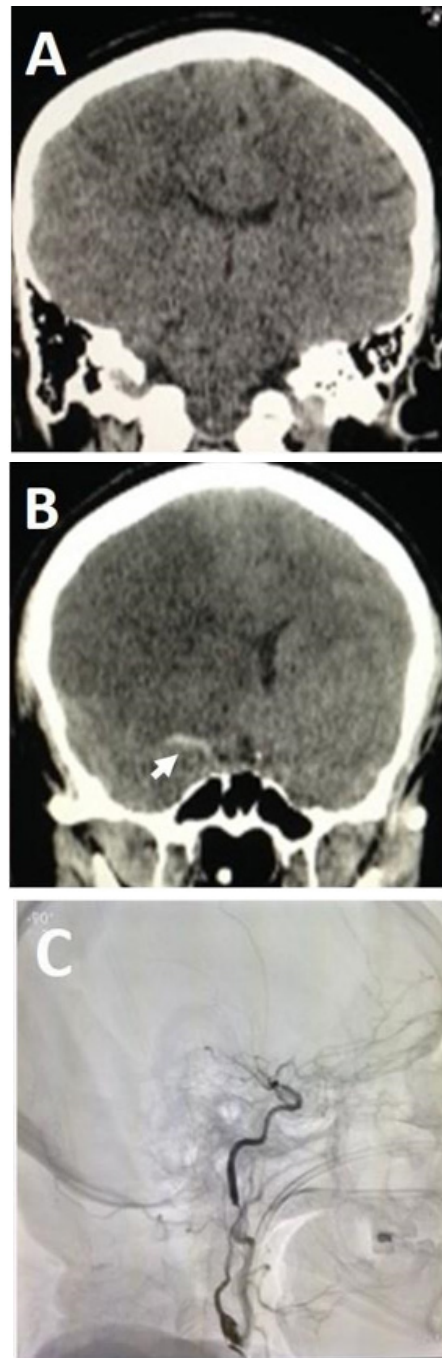


Figure 1. A. A head computed tomography scan showed slight edema in the right cerebral parenchyma without deviation of the midline structures. B. Twenty-four hours later, the patient became drowsy, and a new CT scan of the skull showed considerable edema (hypodensity) in the right cerebral hemisphere involving the middle cerebral artery (MCA) territory. See the hyperdense MCA sign or Gács sign, representing thromboembolic material within the arterial lumen (arrow). C. Arteriography of the neck and head vessels showing a dissection of the right carotid artery and occlusion of the right middle cerebral artery in the M1 segment.



Comments

Unilateral neck pain is a warning sign the emergency physician should value; often benign, but it may represent a sign of cervical arterial dissection. Sometimes, unilateral neck may be accompanied by oculosympathetic palsy, amaurosis fugax, and symptoms of focal brain ischemia.⁶ An antiplatelet or anticoagulant drug should be used chronically in diagnosing the dissection.⁷⁻¹² However, there are risks of extending the dissection through the vessel wall, or even an increased risk of systemic bleeding.¹ There is a renewal of the arterial endothelium every three years. We must understand that the arterial wall is a living tissue, with apoptosis and the emergence of new cells, with permanent cell renewal, which allows tissue repair, if necessary. Surgical interventions can also be performed.^{8,11}

Cases of carotid arterial dissection have been misdiagnosed with different headache types, in particular with cluster headache.^{2,13-25} The detection of Horner syndrome in a patient with a new-onset headache may help promptly diagnose a cervical arterial dissection.^{6,26,27} A case of a patient with traumatic internal carotid artery dissection with a clinical picture mimicking hemicrania continua was reported, and this painful entity responded to indomethacin.¹⁴

A case of a man who presented to the emergency department with a 2-week persistent headache was recently reported.² He complained of tension-type headaches for several years. However, he had no history of diagnosed migraines until he was seen four days prior for empiric migraine therapy in the same emergency department and left without improvement in symptoms.² On his second visit, a visual deficit in the left upper quadrant was detected. On his return visit, a computerized tomography scan with intravenous contrast revealed a left vertebral artery dissection, a hematoma, and a small infarction of the right lingual gyrus cortex on magnetic resonance imaging.² The authors emphasized maintaining a wide differential diagnosis and high index of suspicion in the patient with new focal neurologic findings to diagnose a potentially fatal disease.²

Usually, the prognosis of spontaneous carotid dissection is benign, especially when anticoagulant treatment or antiplatelet therapy is given early. As with our patient, some evolve to cerebral infarction with complications, requiring surgical intervention.⁶

Conclusions

The diagnosis of arterial dissection is based on clinical suspicion and angiographic images of the encephalic vessels.

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