

CONTINUING MEDICAL EDUCATION ΣΥΝΕΧΙΖΟΜΕΝΗ ΙΑΤΡΙΚΗ ΕΚΠΑΙΔΕΥΣΗ

Vascular Diseases Quiz – Case 23

A 44-year-old male with no medical history presented to our hospital with acute onset of headache on the left side of the head and pulsatile tinnitus. Clinical examination revealed a bruit on the left side of the neck and patient was referred to vascular surgeon. Patient did not mention a history of major trauma, but eventually remembered of having his neck turned abruptly during massage. Initially, patient underwent a color Duplex ultrasound examination that revealed a patent left carotid bifurcation without atherosclerotic plaque, but with no flow in left internal carotid artery. Afterwards, patient underwent a digital subtraction angiography (fig. 1).



Figure 1

Comment

Carotid dissection is an unusual condition accounting for 2–3% of all strokes, although this can be as high as 10–25% in young adults. True incidence may be higher because many cases are overlooked due to the fact that symptoms resolve spontaneously. Dissection can be spontaneous or traumatic. Many traumatic carotid dissections occur in motor vehicle accidents, but can also happen after sudden neck movements or after chiropractor manipulation.

Clinical findings include acute onset facial or neck pain, partial Horner's syndrome (miosis and ptosis), cerebral ischemia, amaurosis fugax, transient ischemic attack, cranial nerve palsies and pulsatile tinnitus. Typical patient presents with pain on one side of the head,

ARCHIVES OF HELLENIC MEDICINE 2013, 30(4):506
ΑΡΧΕΙΑ ΕΛΛΗΝΙΚΗΣ ΙΑΤΡΙΚΗΣ 2013, 30(4):506

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ipsilateral partial Horner's syndrome and cerebral ischemia in the next few hours or days. However, only one-third of the patients present with this classic triad.

Differential diagnosis should include cluster headache, migraine, retinal artery occlusion, herpes zoster, neck trauma and musculoskeletal neck pain.

Digital subtraction angiography used to be the standard of diagnosis for carotid dissection. The most common finding is a string sign or a flame-shaped tapering of the lumen. Nowadays, catheter angiography has been replaced, where available, with noninvasive imaging modalities such MRI and MRA that can show luminal stenosis or occlusion, intimal flap and intramural hematoma.

Treatment includes anticoagulation, to prevent thromboembolic complications, with intravenous heparin or low-molecular-weight heparin for 1–2 weeks and then oral warfarin for 3 to 6 months. The international normalized ratio (INR) should be between 2.0 and 3.0. Antiplatelet treatment can be administered if anticoagulation is contraindicated. Surgical or endovascular intervention should be preserved for the minority of patients with persisting symptoms of ischemia.

In the afore-mentioned case, patient's symptoms resolved in one week and he had taken oral anticoagulation therapy for 6 months.

In conclusion, carotid dissection is an uncommon entity but should always be suspected in young adults with signs of cerebral ischemia.

References

1. PATEL RR, ADAM R, MALDJIAN C, LINCOLN CM, YUEN A, ARNEJA A. Cervical carotid artery dissection: Current review of diagnosis and treatment. *Cardiol Rev* 2012, 20:145–152
2. RAO AS, MAKAROUN MS, MARONE LK, CHO JS, RHEE R, CHAER RA. Long-term outcomes of internal carotid artery dissection. *J Vasc Surg* 2011, 54:370–374
3. SCHELFAUT D, DHONDT E, DE RAEDT S, NIEBOER K, HUBLLOUE I. Carotid artery dissection: Three cases and a review of the literature. *Eur J Emerg Med* 2012, 19:181–187

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Diagnosis: Carotid artery dissection