An Arterial Dissection

A 45-year-old man without a significant past medical history complained of sudden post-coital left orbital pain that progressed to left-sided facial pain, headache and blurry vision. He denied any neck pain. Forty-five minutes later, he developed transient right hemiparesis and numbness in the arm, which resolved by the time he reached the hospital. His exam was normal. Brain CT was normal. MRI of the brain revealed a high signal intensity along the wall of the distal cervical portion of the left internal carotid artery best seen on the fat-suppressed T1 image (Right). MR angiography revealed focal narrowing of the lumen in this portion of the left carotid as it entered the base of the skull (Left). The left internal carotid was widely patent proximal and distal to the lesion. The right carotid and the vertebral arteries were of normal caliber. These findings taken with the patient's history are consistent with a focal left carotid dissection. The patient was started on intravenous heparin followed by oral warfarin.

Spontaneous dissection of the carotid or vertebral arteries is an uncommon, though significant cause of ischemic strokes in young and middle-aged patients, accounting for 10-25% of these cases. Arterial dissections are usually the result of an intimal tear, which allows blood to enter the artery wall. This forms an intramural hematoma and causes narrowing of the vessel lumen. Structural defects in the arterial wall can predispose an individual to spontaneous dissection and may signal an underlying connective tissue disorder. Anticoagulation is recommended for patients with acute dissections to prevent thromboembolic complications and to allow the artery to heal spontaneously. Surgical or endovascular treatment is typically reserved for patients with persistent ischemic symptoms despite anticoagulation therapy. Though conventional angiography has been a gold standard in the diagnosis of arterial dissections, MR imaging has become a widely accepted modality for diagnosis and follow-up of these patients.

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REFERENCES

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