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Horner syndrome after stenting of a coarctation of the aorta

A 31-year-old asymptomatic man presented with higher blood pressure in the left arm (148/90 mm Hg) as compared to the contralateral side (124/88 mm Hg) and both legs (120/84 mm Hg). The clinical suspicion of coarctation of the aorta (CA) associated with a right subclavian artery (RSA) stenosis was confirmed with MRI and angiography, with an ostially stenotic RSA originating from the CA (arteria lusoria) (panel A). Stenting eliminated the 30 mm Hg gradient over the CA (panel B: RCA, right carotid artery; LCA, left carotid artery; LSA, left subclavian artery; arrow: supporting wire).

Seven days after this procedure, the patient presented to the emergency room because of a severe right-sided headache and ptosis of the right eyelid (panel C). Careful neurological examination revealed a discrete miosis in the right eye. The clinical picture suggested a Claude Bernard–Horner syndrome. MRI angiography showed a dissection of the right internal carotid artery 2.5 cm distal of the carotid bifurcation resulting in a total occlusion (panel D: RCB and LCB, right and left carotid bifurcation; RVA and LVA, right and left vertebral arteries; arrow: point of occlusion). Both vertebral arteries were patent. Revision of the stenting procedure showed deep seating of the supporting wire in the RCA, suggesting a local trauma as the possible physiopathological mechanism of the dissection (panel B: arrow). Anticoagulation treatment was initiated, targeting an international normalised ratio between 2 and 3. Fortunately, the Horner syndrome resolved over the next few days.

This case report clearly shows the vulnerability of the cerebral arteries due to connective tissue disease such as cystic media necrosis in patients with CA and has to make interventional cardiologists reluctant to position a supporting wire in the carotid artery.

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