Carotid Artery Pseudoaneurysm after Jugular Puncture

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The images correspond to a 32-year-old female patient with dilated cardiomyopathy of unknown etiology and a two year history of severe left ventricular function impairment (EF 17%). She was admitted to another health center with acute heart failure, requiring inotropic support. She underwent unsuccessful right jugular vein puncture and Swan-Ganz catheter placement. The patient was transferred to our center 5 days later for a pre-heart transplant evaluation.

On admission, a hematoma was found at the jugular venipuncture site (Image A), and an echo-Doppler of neck vessels revealed a pseudoaneurysm at the level of the bifurcation of the right carotid artery (Image B). Color echo-Doppler (Image C) shows a “to-and-fro” jet flow towards the plane of the skin through a pericarotid hematoma.

Manual compression of pseudoaneurysm was performed without effective complete thrombosis, so surgical management was decided. An arteriorrhaphy of the carotid bifurcation was performed under local anesthesia, without complications (Image D).

Carotid pseudoaneurysm can be caused by traumas, arteritis, infections, etc. (1) Inadvertent carotid puncture is a relatively common complication during central venous catheter placement in the jugular vein (about 5%); however, development of carotid pseudoaneurysm is very rare. The aim of the treatment is to prevent airway compression due to pseudoaneurysm rupture and thromboembolism from the pseudoaneurysmal sac to the central nervous system. (5) Treatment can be surgical, endovascular (drug-eluting stent placement, coil embolization), or percutaneous (thrombin injection).

Conflicts of interest
None declared

REFERENCES