
Abstract:

OBJECTIVE: This study aims to describe the clinical management of inadvertent arterial catheterisation after attempted central venous catheterisation.

METHODS: Patients referred for surgical or endovascular management for inadvertent arterial catheterisation during a 5-year period were identified from an endovascular database, providing prospective information on techniques and outcome. The corresponding patient records and radiographic reports were analysed retrospectively.

RESULTS: Eleven inadvertent arterial (four common carotid, six subclavian and one femoral) catheterisations had been carried out in 10 patients. Risk factors were obesity (n=2), short neck (n=1) and emergency procedure (n=4). All central venous access procedures but one had been made using external landmark techniques. The techniques used were stent-graft placement (n=6), percutaneous suture device (n=2), external compression after angiography (n=1), balloon occlusion and open repair (n=1) and open repair after failure of percutaneous suture device (n=1). There were no procedure-related complications within a median follow-up period of 16 months.
CONCLUSIONS: Inadvertent arterial catheterisation during central venous cannulation is associated with obesity, emergency puncture and lack of ultrasonic guidance and should be suspected on retrograde/pulsatile catheter flow or local haematoma. If arterial catheterisation is recognised, the catheter should be left in place and the patient be referred for percutaneous/endovascular or surgical management.