IMAGES IN CARDIOLOGY

Percutaneous closure of a false aneurysm of the superficial femoral artery under fluoroscopic guidance

A 74 year old woman was referred to our hospital for percutaneous mitral valvuloplasty. She recently underwent diagnostic left and right heart catheterisation in a referring hospital. Several hours after manual sheath removal she noticed a painful swelling of her right groin. At physical examination a pulsating mass was found in the right groin measuring 5 × 5 cm and a systolic murmur could be heard over the area. It was decided to first visualise and treat a suspected false aneurysm of the right femoral artery.

The right superficial femoral artery was selectively engaged using a 5 French Sidewinder catheter from the left common femoral artery. Digital subtraction angiograms were made and a false aneurysm originating from the right superficial femoral artery was diagnosed (panel A, jet entering aneurysm). Under fluoroscopic guidance the aneurysm was punctured with an 18 G needle and a short 0.035 guidewire was introduced (panel B). After predilation, a 9 French Vasoseal system was introduced into the aneurysm. Through the cannula collagen plugs were inserted in the aneurysm (panel C, thrombosis ongoing). After thrombosis was completed (panel D, false aneurysm closed) there was immediate haemostasis at the puncture site and the cannula could be withdrawn without any back bleeding. No additional manual compression was necessary. The whole procedure took less than 10 minutes. The subsequent mitral valvuloplasty was uneventful. This minimally invasive closure technique can easily be performed in any catheterisation laboratory and allows ad hoc treatment of false aneurysms by cardiologists unfamiliar with ultrasound equipment.

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Acute myocardial infarction caused by gunshot wound

A 27 year old man was hospitalised because of chest pain that had started eight hours earlier following an argument. On admission he was alert and his blood pressure was 120/80 mm Hg. Physical examination revealed no other abnormalities except for wounds on the thoracic wall and skull, presumably caused by entry of gunshot pellets. No exit wounds were found. Cranial computed tomography, magnetic resonance imaging, and EEG were normal. The ECG showed pronounced ST elevation in the inferior leads. Telecardiogram revealed dissection of the right coronary artery by the pellet (see panels). Removal of the pellet, percutaneously or surgically, was

not attempted because although the patient was haemodynamically stable, the risk of catastrophic haemorrhage was high.

The patient was discharged nine days later with no ongoing problems, having

experienced an uncomplicated inferior myocardial infarction.

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