Aortic root rupture with giant thoracic haematoma: transient improvement after percutaneous closure with ASD-amplatzer device

Santo Ferrarello, Tiziano Moccetti, Jos C. Van den Berg, and Giovanni B. Pedrazzini*

An 83-year-old man, known for previous coronary bypass surgery, was admitted to the emergency department with acute chest pain, poor haemodynamic stability, and superior vena cava syndrome. The CT angiography (Panel A) showed a rupture of the aortic root, 10 cm above the aortic valve, with the development of a large mediastinal haematoma (9.8 × 4.9 cm). Considering the extremely high surgical risk, we decided to attempt a percutaneous closure using an ASD-Amplatzer device 12 mm (St Jude Medical, St Paul, MN, USA). The large pseudoaneurysm could be easily entered with a Multipurpose 6F catheter (Panel B). The Amplatzer-ASD was introduced by means of an 8F Torque View catheter and delivered across the aortic rupture under fluoroscopic guidance (Panel C). The CT angiography performed 12 h later demonstrated a well-positioned device with minimal residual perfusion of the false aneurysm (Panel D). Forty-eight hours after the procedure the clinical conditions of the patient worsened dramatically with the appearance of a massive left pleural effusion due to the spreading of the bleeding into the left thoracic cavity. Owing to severe multi-organ failure and despite inotropic support, the patient died few hours later in cardiogenic shock.

(Panel A) Anglo-CT showing the aortic rupture (white arrow) and the large mediastinal haematoma (white-dotted arrows). (Panel B) Periprocedural fluoroscopy with 6 F Multipurpose into the haematoma and pig tail in the ascending aorta. (Panel C) ASD-Amplatzer 12 mm device across the aortic wall (white arrow). (Panel D) Anglo-CT 12 h after the procedure with device (white arrow) stable across the aortic wall. Ao, aortic root; Ps-An, thoracic pseudo-aneurysm; LV, left ventricle.

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