


CARDIOVASCULAR FLASHLIGHTS

E. Swahn et al.

Aortic pseudo-aneurysm caused by complete dehiscence of the left coronary artery 7 years after a composite mechanical-valved conduit aortic root replacement (Bentall operation)

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A 65-year-old man was admitted with rapidly progressive dyspnoea. He had been operated on for a type A aortic dissection 11 years earlier (supracommissural replacement), and 4 years later underwent a Bentall operation for dehiscence of the proximal graft anastomosis and severe aortic regurgitation.

On admission, high jugular venous pressure and pulmonary oedema were noted. Acute respiratory distress with cyanosis developed in the supine position and the patient was intubated. Dynamic electrocardiographic changes with ST-elevation (I–aVL) and ST-depression (V4–V6) occurred when the patient was moved from the supine (Panel A) to the left lateral position (Panel B). A three-dimensional transoesophageal echocardiogram demonstrated a 9 x 8 cm large aortic pseudo-aneurysm (*), posterior to the composite graft (#), compressing the left atrium (§), and communicating with the left ventricular outflow tract through a large fistula (arrow) with bidirectional flow (Panels C and E). There was a 5 x 9 mm orifice (arrowhead) on the left side of the aortic graft communicating to the pseudo-aneurysm with dense continuous flow, suggesting dehiscence of the left coronary artery (Panels D and F). A computed tomographic scan (Panels G–I) showed the proximal end of the left coronary artery (red arrow) originating from the pseudo-aneurysm, 10 mm apart from the composite graft. Emergency surgery was performed and intraoperative findings confirmed the dehiscence of the left coronary artery with the main stem floating freely in the pseudo-aneurysmal cavity. Inflammatory markers and blood cultures were negative.

Complete coronary artery dehiscence is an exceptional cause of pseudo-aneurysm after a Bentall operation; it resulted in extensive myocardial ischaemia, the myocardial perfusion being exclusively dependent on intra-aneurysmal pressure.

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