

SHORT CASES IN CARDIOLOGY

Salvage angioplasty and stenting following spontaneous dissection of the left anterior descending coronary artery

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A 46 year old woman presented with sudden onset severe, tight, central chest pain. She had stopped smoking 10 years previously, but there were no other cardiac risk factors. The ECG showed sinus rhythm with marked ST elevation over the anterior chest leads, and she received intravenous tPA within two hours of symptom onset. Despite thrombolysis, diamorphine, and intravenous β blockade, the pain

persisted. The ECG showed increased ST elevation.

She was transferred to the regional cardiac centre where examination revealed persistent severe chest pain, tachycardia, and hypotension. Coronary angiography showed an occlusive dissection flap in the proximal left anterior descending coronary artery (fig 1A); circumflex and right coronaries were normal. Balloon

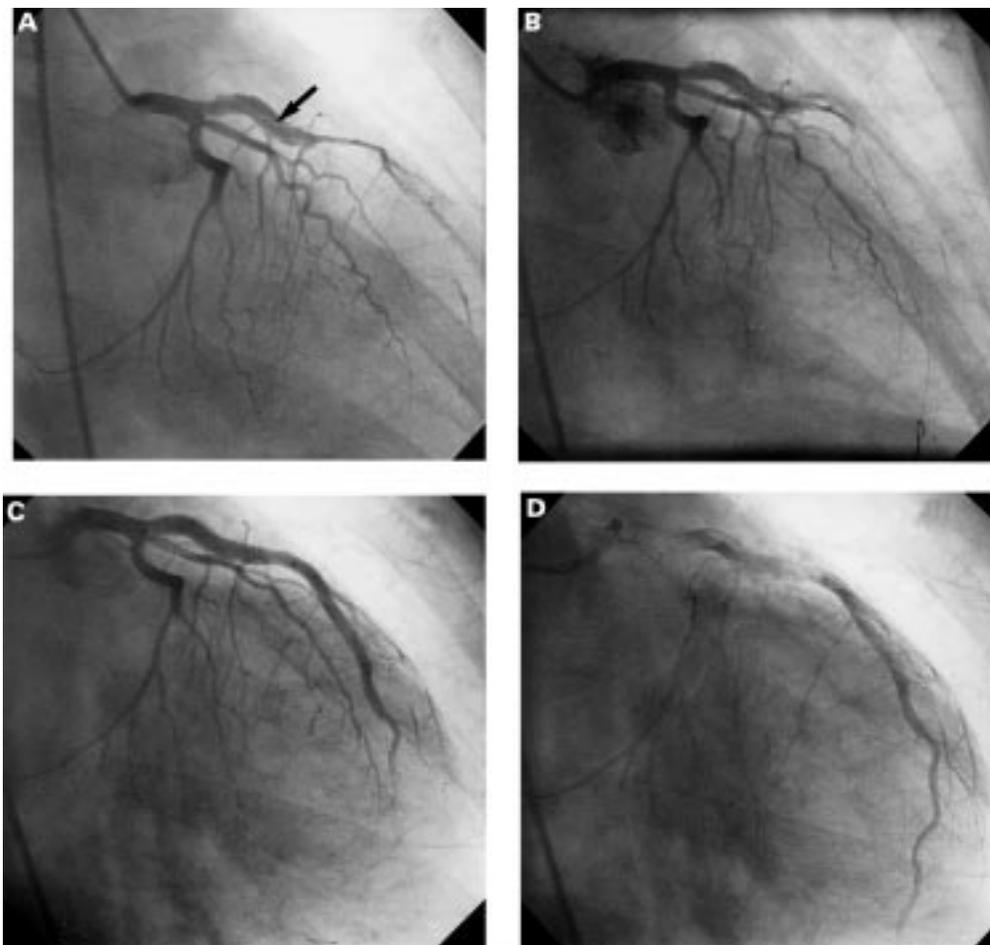


Figure 1 Selective coronary angiogram of the left coronary artery in the right anterior oblique projection. (A) A dissection flap in the proximal left anterior descending coronary artery with limited antegrade flow beyond the first septal. There is some minor improvement in antegrade flow following balloon angioplasty (B) with substantial improvement in flow following insertion of two coronary stents (C). (D) Persistent dissection of the distal left anterior descending coronary artery beyond the coronary stents.

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angioplasty resulted in improved flow (fig 1B) and two overlapping intracoronary stents were placed in the proximal and mid vessel (3.5×38 mm and 3.0×28 mm, Multilink; Guidant ACS, Basingstoke, UK). When the procedure had been completed (fig 1C), it became apparent that the dissection had involved the entire vessel up to the apex of the left ventricle (fig 1D). An intra-aortic balloon pump was inserted for 48 hours and the patient was subsequently discharged with treatment of an angiotensin converting enzyme inhibitor, β

blocker, aspirin, and ticlopidine.

The incidence of spontaneous coronary artery dissection in the absence of collagen vascular disease (particularly type IV Ehlers-Danlos syndrome) is poorly documented but it is a recognised cause of sudden cardiac death. Spontaneous dissection cannot be distinguished from atheromatous/thrombotic coronary occlusion using an ECG, but persistent pain and deterioration after thrombolysis in a patient without cardiac risk factors should alert the physician to the possible diagnosis.