

**CLINICAL VIGNETTE**

**Complete occlusion of the aortic isthmus**

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A 44-year-old man was admitted to hospital with severe chest pain. The ECG showed a subacute myocardial infarction. An attempt of interventional revascularization from the femoral artery failed because the catheter could not be advanced via the thoracic aorta. A brachial approach showed a coronary two-vessel disease with occlusion of the circumflex artery. Despite successful revascularization, the left ventricular ejection fraction remained severely depressed (20%). A CT scan revealed complete occlusion of the descending aorta distal to the origin of the left subclavian artery (Panel A). Interventional reconstitution of the aortic continuity was planned to reduce the left ventricular afterload. A pigtail catheter was placed proximal to the occlusion from a left radial access. An additional left femoral approach allowed simultaneous contrast injection showing the interrupted aortic segment (Panel B), which was then perforated with a transseptal needle and a Brockenbrough catheter (Panel C). The transseptal needle was exchanged for an Amplatz superstiff wire. A covered CP stent mounted on a 15 mm Cordis Maxi balloon catheter was implanted through a Cook blue long sheath (Panel D). The post-interventional angiography proved correct stent position without any pressure gradient, dissection, or aneurysm (Panel D). After 4 weeks, an echocardiographic control showed improved left ventricular ejection fraction (35%).

It remains speculation whether this was a primarily interrupted aortic arch (type A) or a secondarily atretic coarctation.

Panel A. CT scan as a reconstruction (lateral view) of the thorax and abdomen, showing the interruption of the descending aorta at the isthmic level.

Panel B. Simultaneous angiogram of the superior and inferior parts of the descending aorta (RAO view), sparing the atretic segment.

Panel C. Perforation of the atretic segment from a femoral access using a standard transseptal needle and a Brockenbrough catheter (RAO view).

Panel D. Postinterventional angiography showing the implanted CP stent (RAO view).