A 46-year-old man had poorly controlled arterial hypertension despite triple antihypertensive medication for years before by chance aortic coarctation was diagnosed. He was admitted to our institution for operation. Given the high operative risk due to the marked collaterals, we decided on an attempt at percutaneous dilation of the coarctation in surgical stand-by.

However, via the femoral artery, the ascending aorta could not be reached. Angiography in the ascending aorta via the right brachial artery (A, Online Videos 1 and 2) and descending aorta (B) confirmed the diagnosis of aortic atresia with blind-ended proximal and distal aorta separated by 3 mm and marked collaterals. As an attempt of recanalization from the brachial approach was unsuccessful, interruption of the aortic arch was recanalized and reconstructed with a Brockenbrough needle (C, Online Videos 3 and 4) and subsequent implantation of a covered stent (Cheatham-Platinum stent, NuMED Inc., Cornwall, Ontario, Canada) (D, Online Videos 5 to 8) from the femoral side without any complications. During follow-up, blood pressure could be controlled with standard doses of an angiotensin receptor blocker and beta-blocker underscoring the need to exclude secondary hypertension.