

A rare angiographic image of Vieussens' arterial ring associated with coronary to pulmonary artery fistula

Koroner arter ve pulmoner arter arasındaki fistül ile ilişkili Vieussens' arter halkasının nadir bir anjiyografik görüntüsü

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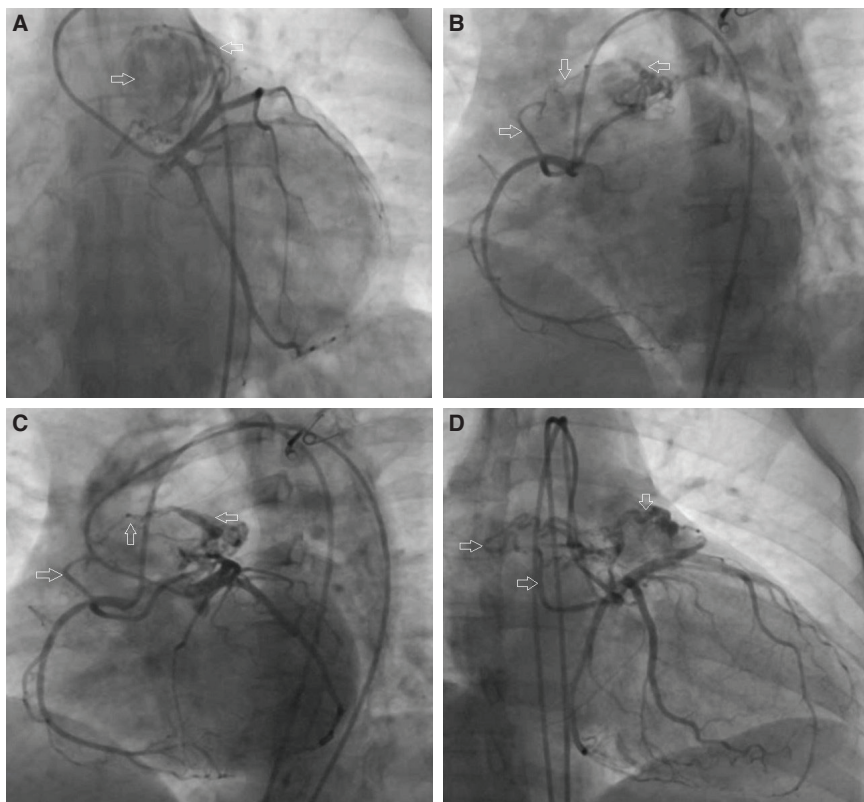
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Vieussens' arterial ring (VAR) is a collateral circulation between the conus branches of the right coronary artery (RCA) and the left anterior descending artery (LAD), and is thought to be an embryologic remnant. It was first described by Raymond de Vieussens in 1706. VAR is found in 48% of the population, but pathological conditions related to VAR (aneurysm, rupture, fistula) are very rare. A 57-year-old woman with a history of diabetes mellitus and hypertension was admitted to the cardiology clinic complaining of chest pain. Coronary angiography was planned due to a positive exercise stress test. Coronary angiography demon-

strated normal coronary arteries. Double injection of left main coronary artery and RCA revealed VAR between the first diagonal branch of LAD and RCA with a coronary artery fistula (CAF) (Figures A–D; Videos 1, 2^{*}). The symptoms of the patient were attributed to these collaterals and she was discharged with the anti-ischemic therapy including a beta-blocker and nitrate. Although percutaneous closure of the fistula has been planned in case of drug-resistant angina, she was asymptomatic at the first month control visit under low-dose beta-blocker therapy. Bilateral CAF is an infrequent congenital malformation and most patients are asymptomatic. The incidence of CAF is 1 in 50,000 among live births, and while most originate from the RCA (53%), 42% originate from the LAD, and 5% from both the LAD and the RCA. Reports of VAR with CAF are uncommon; however, surgical or percutaneous closure treatment modalities have been described before. This is an important and rare case of a fistula between the VAR and the pulmonary artery.



Figures— (A) Left coronary angiography revealing a fistula between the left anterior descending coronary artery and the pulmonary artery (arrows). (B) Right coronary angiography demonstrating a fistula between the right coronary artery and the pulmonary artery (arrows). (C, D) Visualization of Vieussens' arterial ring, pulmonary artery fistula, and opacification of the main pulmonary artery (arrows).

*Supplementary video files associated with this presentation can be found in the online version of the journal.