

## Circumflex artery originating from right pulmonary artery leading to myocardial ischemia association with ventricular septal aneurysm

### *Ventriküler septal anevrizma ile ilişkili miyokart iskemisine yol açan sağ pulmoner arter orijinli sirkumfleks arter*

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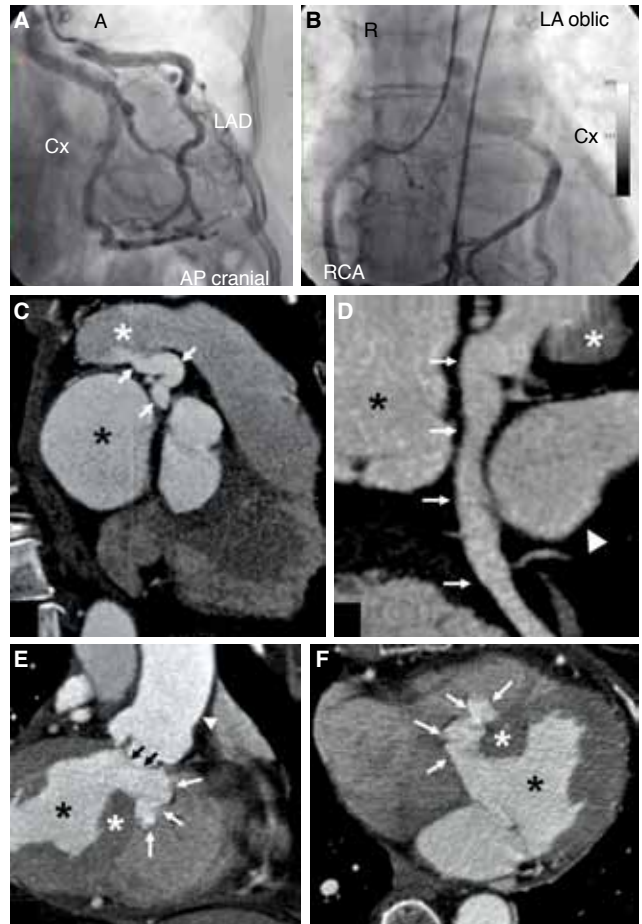
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Left circumflex (LCx) coronary artery anomaly that originates from the pulmonary artery is extremely rare, especially in the adult population. The reason for this is that most patients go untreated, or are lost at early ages with conditions like cardiac insufficiency, arrhythmia, and myocardial ischemia. In this case report,

a 68-year-old female patient who was asymptomatic until up to the time she was an adult had undergone coronary angiography because of chest pain and evidence of ischemia on echocardiography. On conventional angiography, the LCx showed late retrograde filling from the right coronary artery (RCA) and left anterior descending artery (LAD) by collaterals and it drained into the pulmonary artery (Fig. A, B). For confirmation of the exact origin of the circumflex artery, multi-slice computed tomography (MSCT) was done. MSCT clearly showed the origin and proximal course of the anomalous LCx in association with the spontaneously closed ventricular septal defect, which was termed a ventricular septal aneurysm in the literature (Fig. C-F). In the present case report, an adult patient presenting with signs and symptoms of myocardial ischemia had a very rare condition characterized by an anomalous circumflex artery arising from the pulmonary artery and had a spontaneous closed ventricular septal aneurysm. To our knowledge this is the first case in the literature. In addition, this case report is a successful example of MSCT use in coronary anomaly patients in whom the origin could not be clarified with conventional coronary angiography. As far as we are concerned, this is the first case in the literature revealing an anomalous LCx artery originating from the pulmonary artery in association with a ventricular septal aneurysm.



**Figures– (A, B)** X-ray coronary angiography shows the retrograde filling of an anomalous left circumflex artery through collateral vessels provided by the left anterior descending artery and the right coronary artery. **(C)** In a sagittal multiplanar reformatted CT image; LCx, (white arrow) originated from the right pulmonary artery (white asterisk) and the tortuous course between the aorta and pulmonary artery is shown. **(D)** In the curved multiplanar CT image; LCx (white arrows) originated from the right main pulmonary artery (white asterisk) and adjacent to the aorta (black asterisk) and left atrium (arrow head) are shown. **(E)** In the multiplanar reformatted multi-slice computed tomography (MSCT) analysis; lobulated contoured aneurismal excess filling (white arrows) which extends at the right ventricle from the membranous part of the interventricular septum is shown. The left ventricle (black asterisk), membranous part of the interventricular septum (white asterisk) and aortic valve (black arrows) are demonstrated in the picture. **(F)** In axial reformatted MSCT image, the left ventricle (black asterisk), aneurismal excess filling originated from the membranous part of the interventricular septum (white arrows) and muscular part of the interventricular septum (white asterisk) are demonstrated. \*Supplementary video files associated with this presentation can be found in the online version of the journal.

