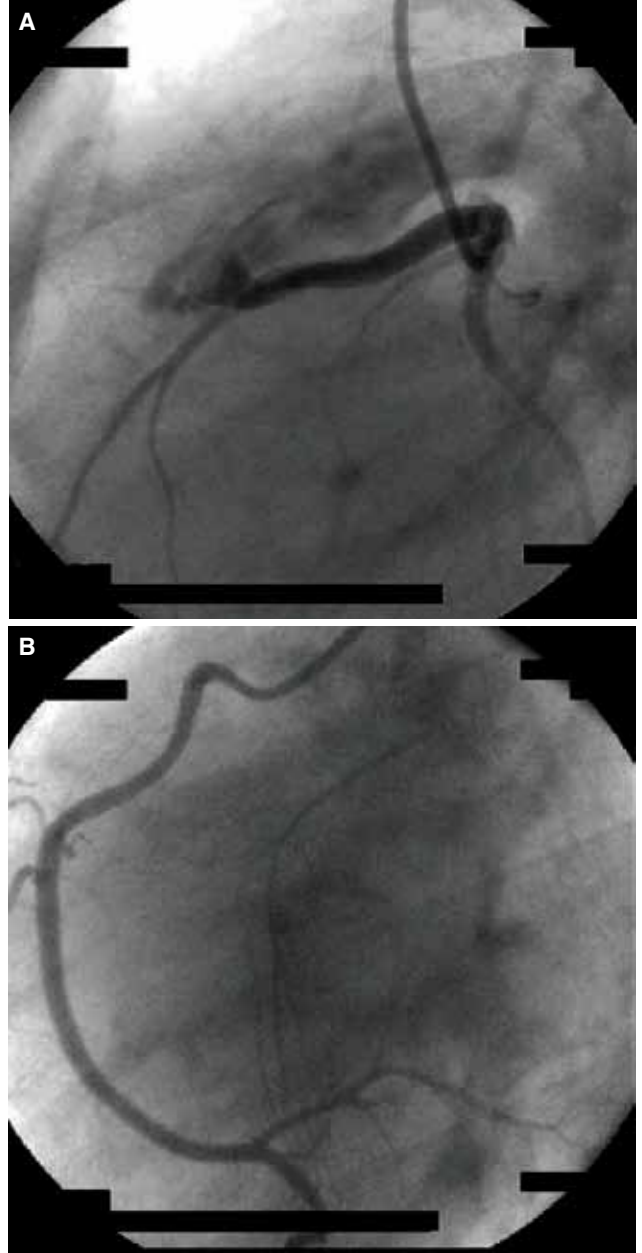# Coronary-to-pulmonary artery fistula due to a penetrating trauma

## *Delici yaralanmaya bağlı koroner-pulmoner arter fistülü*

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A 35-year-old man was admitted to the emergency service with unconsciousness. He had a two-month history of a stab wound with a knife in the chest (third left intercostal space), for which a chest tube had been inserted because of subsequent hemothorax. He was referred to our cardiology outpatient clinic after discharge because of a murmur heard on cardiac examination. On admission, the electrocardiogram showed T-wave inversion on leads V1-V3, D1, and aVL. On echocardiography, he had an ejection fraction of 55%, mild mitral regurgitation, and hypokinesia of the septum. Coronary angiography was performed to exclude any coronary artery injury due to the penetrating trauma in the chest. A fistula was seen between the left descending coronary artery (LAD) and left pulmonary artery, along with total occlusion of the LAD in the mid portion (Fig. A, supplementary video file*). There was an antegrade TIMI 1 flow and Rentrop 3 collateral flow from the right coronary artery to the LAD (Fig. B). Other coronary arteries were normal. The patient was referred to surgery for fistula ligation and a LIMA-to-LAD bypass, because of the large left-to-right shunt and coronary ischemia on electrocardiography. A traumatic fistula from the proximal LAD artery to the pulmonary artery is extremely rare, with only few reported cases in the English literature. All these cases had delayed presentation in common. Therefore, coronary artery fistulas should be investigated cautiously after chest trauma.



**Figures. (A)** Left and **(B)** right coronary artery angiograms showing a LAD-to-pulmonary artery fistula and collateral flow from the right coronary artery to the LAD, respectively. *Supplementary video file associated with this case can be found in the online version.*