

A “Mickey Mouse” Coronary Anomaly Aorto-Left Atrial Fistula With Aneurysm

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A 58-year-old asymptomatic man with a heart murmur underwent routine Doppler stress echocardiography that detected abnormal high-intensity flow from the aorta to the left atrium. Coronary angiography with a 6-French Amplatz left catheter (Scimed/Boston Scientific) and MEDRAD (MEDRAD Inc) power injections of radiographic contrast revealed a large aorto-left atrial fistula originating anteriorly from the aorta above the sinotubular junction. The fistula coursed caudally and posteriorly, giving off a right coronary artery. The fistula passed behind the aorta and developed into a large bilobed area of aneurysmal dilation resembling Mickey Mouse ears.

before draining into the left atrium (Figure 1). Contrast-enhanced retrospectively gated spiral acquisition on a 16-detector CT scanner (SOMATOM Sensation 16, Siemens Medical Solutions) confirmed the angiographic findings (Figures 2 and 3). The dimensions of the aneurysm were 6.5 cm × 4.2 cm × 3.9 cm in the transverse, craniocaudal, and anteroposterior planes, respectively. The patient underwent surgical repair consisting of transatrial closure of the fistula tract with oversewing of a pericardial patch, exclusion of the aorto-left atrial fistula and left atrial appendage, as well as saphenous vein bypass grafting of the right coronary artery.



Figure 1. Coronary angiogram shows a large fistula (black arrow) arising from the anterior aorta and giving off a right coronary artery (white arrow) before developing into a large area of aneurysmal dilation that resembles Mickey Mouse ears. The fistula drains into the left atrium.

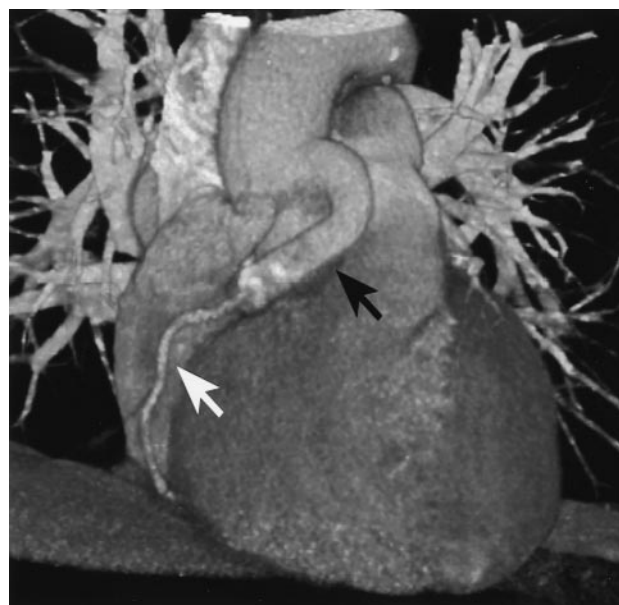


Figure 2. Select volume-rendered images and a curved multiplanar reconstruction on CT demonstrate a large aberrant fistula arising from the mid-ascending aorta (large black arrows). The fistula gives rise to a normal right coronary artery (white arrow). The aberrant fistula continues posteriorly, where it becomes a large lobular retroaortic chamber (stars) and ultimately drains into the roof (small black arrows) of the left atrium (LA).

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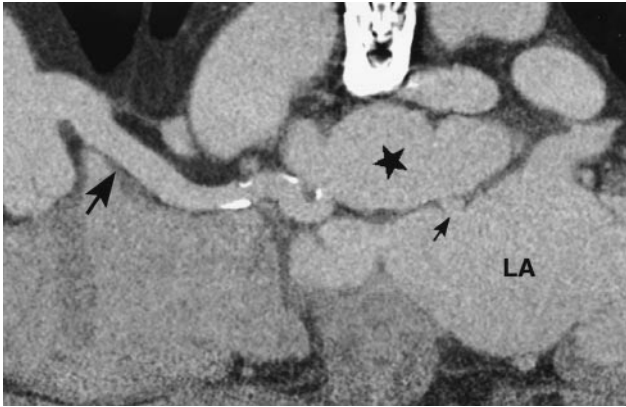


Figure 3. See Figure 2 legend.

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