Images in Anesthesia: Transesophageal echocardiography images of anomalous circumflex coronary artery

FIGURE 1 Transesophageal echocardiography mid-esophageal four-chamber view with colour Doppler. Arrow indicates anomalous circumflex artery.

FIGURE 2 Transesophageal echocardiography mid-esophageal aortic valve long-axis view with colour Doppler. Arrow indicates anomalous circumflex artery.

A 44-yr-old female with rheumatic mitral and aortic valve disease was scheduled for double mechanical valve replacements. Her preoperative angiography revealed an anomalous circumflex vessel that arose from the right coronary sinus. The prevalence of this finding is 0.16 to 0.45%.¹ Intraoperative transesophageal echocardiography (TEE; Philips Sonos 5500, Philips Medical Systems, Toronto, ON, Canada) showed an anomalous circumflex artery traveling across the aortic wall just above the base of the annulus (Figures 1 and 2). At surgery, these findings were confirmed. In fact, the anomalous artery continued between the aortic mitral continuity into the posterior groove. The surgical technique was modified to avoid injury of the vessel. Post-pump TEE showed inferior wall and posterior wall akinesis. The anomalous circumflex vessel could not be identified. Postoperative angiogram demonstrated a normal right coronary artery and a normal left anterior descending artery; however the circumflex vessel became occluded right between the aortic and mitral mechanical valves. A thallium scan showed very little to no reperfusion of the area and she did not have further surgery or interventions. This case demonstrates the challenges of mitral and aortic valve replacements in patients with an anomalous coronary artery.

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Reference

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