Images in cardio-thoracic surgery

Right coronary artery fistula into left ventricle: dynamic compression shown by multislice computed tomography

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A 44-year-old male with inferior-posterior myocardial ischemia during ECG stress test was referred to 64-slice computed tomography (CT). CT showed a right coronary artery (RCA) fistula draining into the left ventricle (Fig. 1, Video 1) with dynamic compression of the fistula orifice during systole (Fig. 2). CT provides helpful information about fistula location and length before surgery.

Fig. 1. Mega-right coronary artery (RCA) (A) draining into the left ventricle (B) via the posterior myocardium (white arrow) is shown 3D with multislice computed tomography by applying volume-rendering technique (VRT).

Fig. 2. Retrospective ECG-gated image reconstruction by multislice CT showed the fistula open during end-diastole (A) and narrowing of the inner fistula orifice during end-systole (B) due to compression by the myocardium. The inner fistula orifice is located close to the mitral valve (MV) annulus. The RCA had a tortuous ‘8-shaped’ course before its entrance into the left ventricle (white arrow) (C).

Appendix A. Supplementary data

Supplementary data associated with this article can be found in the online version at doi:10.1016/j.ejcts.2007.08.027.