

Cardiac Imaging

Quadricuspid Aortic Valve

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A 23-year-old man with a recent onset of palpitations and episodes of sharp, localised pain in the left side of his chest was referred to our institution for further diagnostic assessment. There was no history of decreased exercise capacity and/or syncope.

Two-dimensional echocardiography revealed a quadricuspid aortic valve consisting of four unequal cusps (type g according to the Hurwitz and Roberts classification of quadricuspid aortic valves), Panel A. All four aortic cusps were thickened and mildly calcified at their edges. Panel B illustrates the normal systolic opening of all four leaflets. Panel C shows the colour Doppler flow map recorded from a parasternal long-axis view demonstrating a moderate aortic regurgitation quantified by *vena contracta* width measurement (0.5 cm). Two-dimensional

images also demonstrated a left main coronary artery originating low in the aortic root, Panel D (black arrows indicate the left main coronary artery).

A resting 12-lead ECG and 48-hour ambulatory Holter monitoring demonstrated sinus rhythm, a few isolated ventricular ectopic beats, approximately 10/hour atrial ectopic beats and intermittent right ventricular conduction delay.

The patient will be monitored for progression of valve incompetence and symptom development.

We have described a rare case of quadricuspid aortic valve causing moderate aortic insufficiency. The quadricuspid valve was also associated with a left main coronary artery of low origin within the aortic root. This additional information may prove useful in avoiding complications when aortic valve replacement becomes necessary.

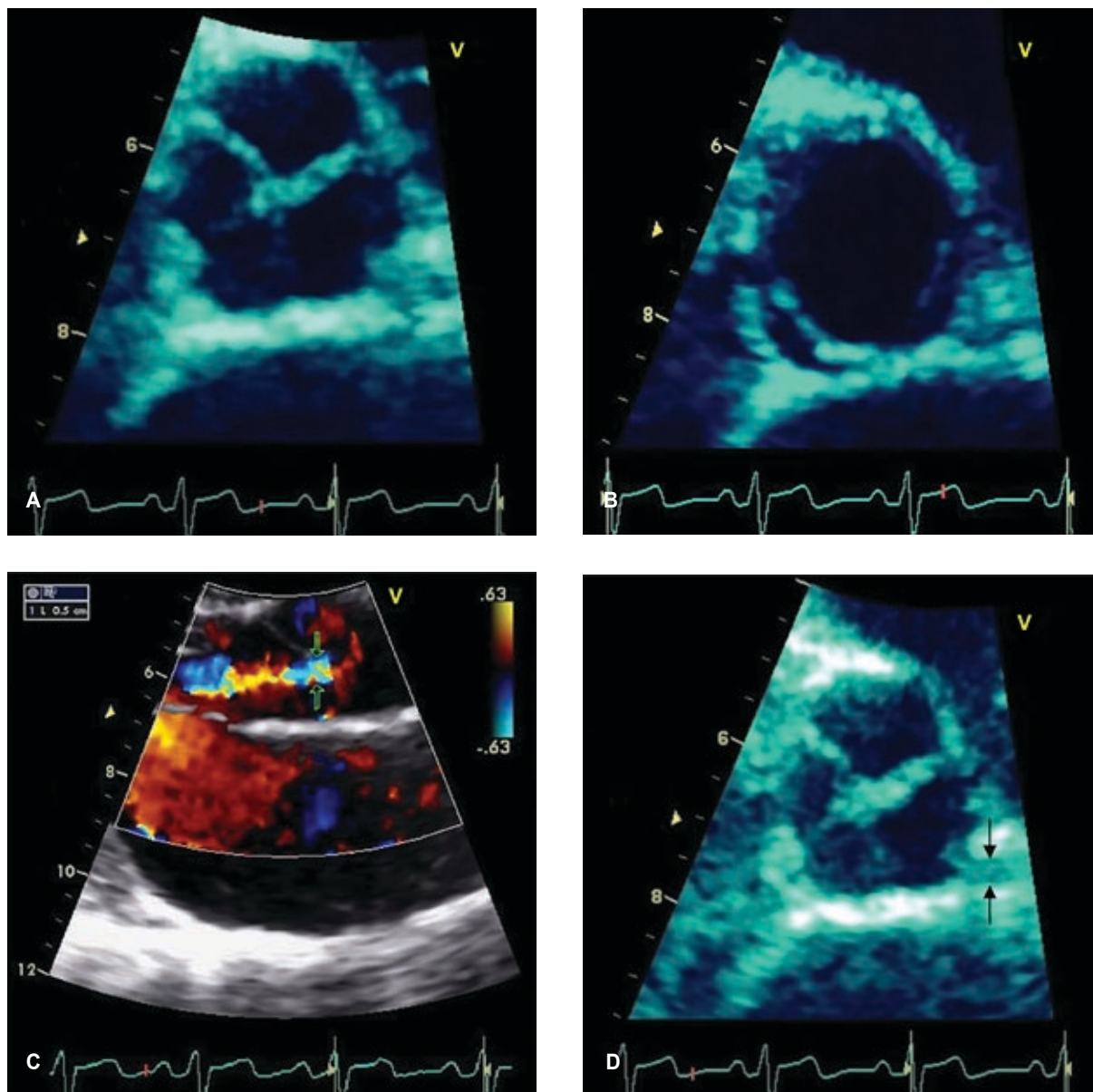


Figure 1. See text