

Cardiac Imaging

Multifocal Infective Endocarditis in a Patient with Congenital Heart Disease

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A 62-year-old patient was admitted to our clinic complaining of low-grade fever for the last 8 months. His past medical history referred to a ventricular septal defect, for which conservative treatment was recommended, and rheumatoid arthritis two years previously (to which the fever had initially been attributed) for which he received a low dose of prednisolone. Three months previously he had also been hospitalised for lobar pneumonia.

On clinical examination he presented with tachypnoea, jugular distension, hepatomegaly and ankle swelling. On cardiac auscultation there was a high frequency

holosystolic 4/6 murmur in the left parasternal position, accompanied by a palpable thrill.

Subsequent echocardiography revealed dilatation of all cardiac chambers with reduced systolic function of both ventricles. A perimembranous subaortic ventricular septal defect^{1,2} was observed, while an echogenic mass with oscillating movement adherent to the defect was also found (Figures 1, 2).

The aortic valve showed moderate calcification of the cusps, while another echogenic mass with oscillating movement was also evident adhering to the ventricular surface of the right coronary cusp (Figure 3).

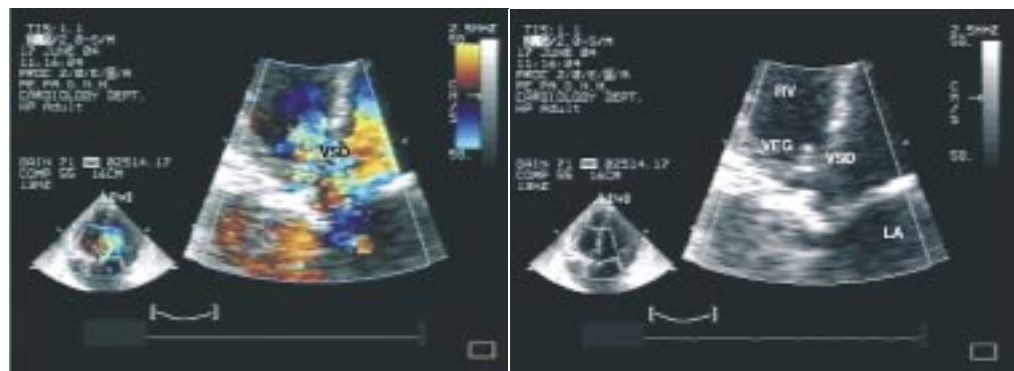


Figure 1. Modified 4-chamber view where the ventricular septal defect is shown with the presence of a vegetation (right panel) while in the left panel using color Doppler the left to right shunt through the ventricular defect is detected.

VEG = vegetation, RV = right ventricle, LA = left atrium, VSD = ventricular septal defect

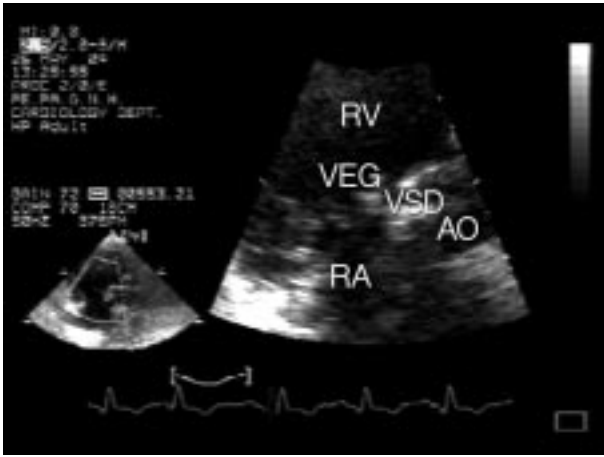


Figure 2. Short axis view of the great vessels where a perimembranous subaortic ventricular defect with a vegetation adherence is shown.

VEG = vegetation, RV = right ventricle, RA = right atrial, VSD = ventricular septal defect, AO=aorta

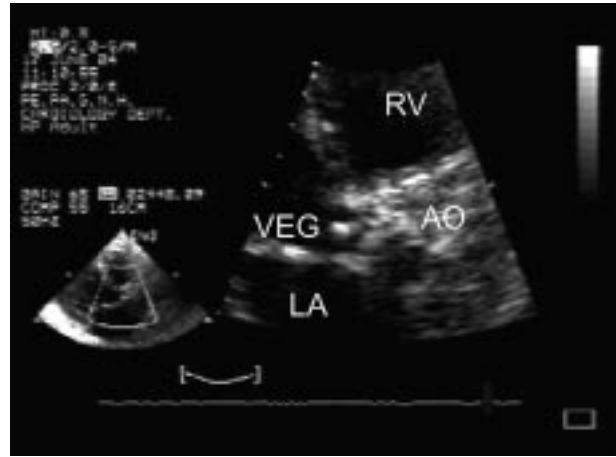


Figure 3. Long parasternal axis view where a vegetation adherent to the ventricular surface of the right aortic cusp is visible.

VEG = vegetation, RV = right ventricle, LA = left atrial, AO = aorta

Finally an echogenic mass was revealed on the ventricular surface of the pulmonary valve (Figure 4). In the blood cultures a methicillin-resistant *Staphylococcus Aureus* was found. The patient underwent a surgical procedure³ where the echo findings were confirmed and the aortic valve was replaced by a mechanical valve, the pulmonary and tricuspid valves were repaired, and the ventricular septal defect was closed.

References

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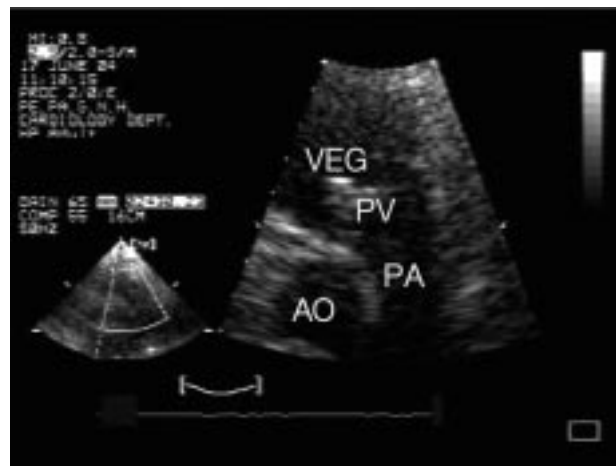


Figure 4. Short axis great vessels view where a large vegetation adherent to the ventricular surface of the pulmonic valve is clearly shown.

VEG = vegetation, RV = right ventricle, PA = pulmonary artery, PV = pulmonary valve