


CASE IMAGE

Unusual localization of vegetations in a native aortic valve infective endocarditis

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Abstract

In case of valvular infective endocarditis, the infection is mainly localized on the flow side of the valves or at damaged valvular endothelium. We describe a rare case of an aortic valvular ineffective endocarditis with an aortic-valve vegetation situated on the aortic side of the valve. We believe this is the first description of this unusual localization of vegetations in a native aortic valve.

KEYWORDS

aortic valve, echocardiography, endocarditis, surgery

1 | CASE REPORT

A 72-year-old man presented to the emergency department complaining of weakness, fever and exercise dyspnea. Past medical history was unremarkable, and no obvious risk factors for infective endocarditis (IE) were present. A grade 4–5/6 diastolic murmur was heard at cardiac auscultation. C-reactive protein level was elevated (89.9 mg/L), as well as the white blood cell count. Blood cultures were positive for *Streptococcus Gallolyticus*. Adapted intravenous antibiotics (Penicillin) were then provided. A first transesophageal echocardiography showed a 7 mm aortic-valve vegetation situated on the aortic side of the valve with signs of mild aortic insufficiency. After 2 weeks of antibiotic therapy with a good clinical and biological evolution a repeated transesophageal echocardiography (Figure 1A, B and D, Movie 1) showed no reduction in the size of the vegetation (8 × 12 mm) with a more mobile aspect. Due to the risk of embolism and a mild to severe insufficiency, an aortic valve replacement was performed with a biologic prosthetic valve. The anatomic examination of the excised valve confirmed echocardiography imaging with presence of vegetations on the aortic side of the bicuspid aortic valve (Figure 1C). Histopathological examination of excised valve tissue demonstrated an infiltrate suggestive of endocarditis: mixed acute and chronic inflammation of the aortic valve leaflets composed of vegetations, lymphocytes, eosinophils and neutrophil polymorphs. Valve cultures were negative for growth of organisms. Post-operative evolution was excellent and the patient was discharged with full recovery 6 day after surgery. Antibiotic therapy (peni-

cillin) was administered for a total of 6 weeks from the time of negative blood cultures. The 2 years follow-up show any reinfection. Bacterial colonization of a native-valve in most cases happens on damaged valvular endothelium and patient with bicuspid aortic valve are said to be at higher risk of IE than patients with tricuspid aortic valve. Though the reason remains unknown, it may be hypothesis that altered flow patterns across the bicuspid valve may cause valvular endothelial injury ("jet lesions") allowing local bacterial adhesion.^{1–3} Therefore, concerning the aortic valve, those lesions generally occur on the ventricular, flow, side (or the edge) of the valve. Development of vegetations on the aortic side of the aortic native valve is, to our knowledge, a very unusual presentation. According to an overview of the literature, this is the first report of this unusual localization of vegetations in a native aortic valve IE inside the aortic valve cusps.

CONFLICT OF INTEREST

None declared.

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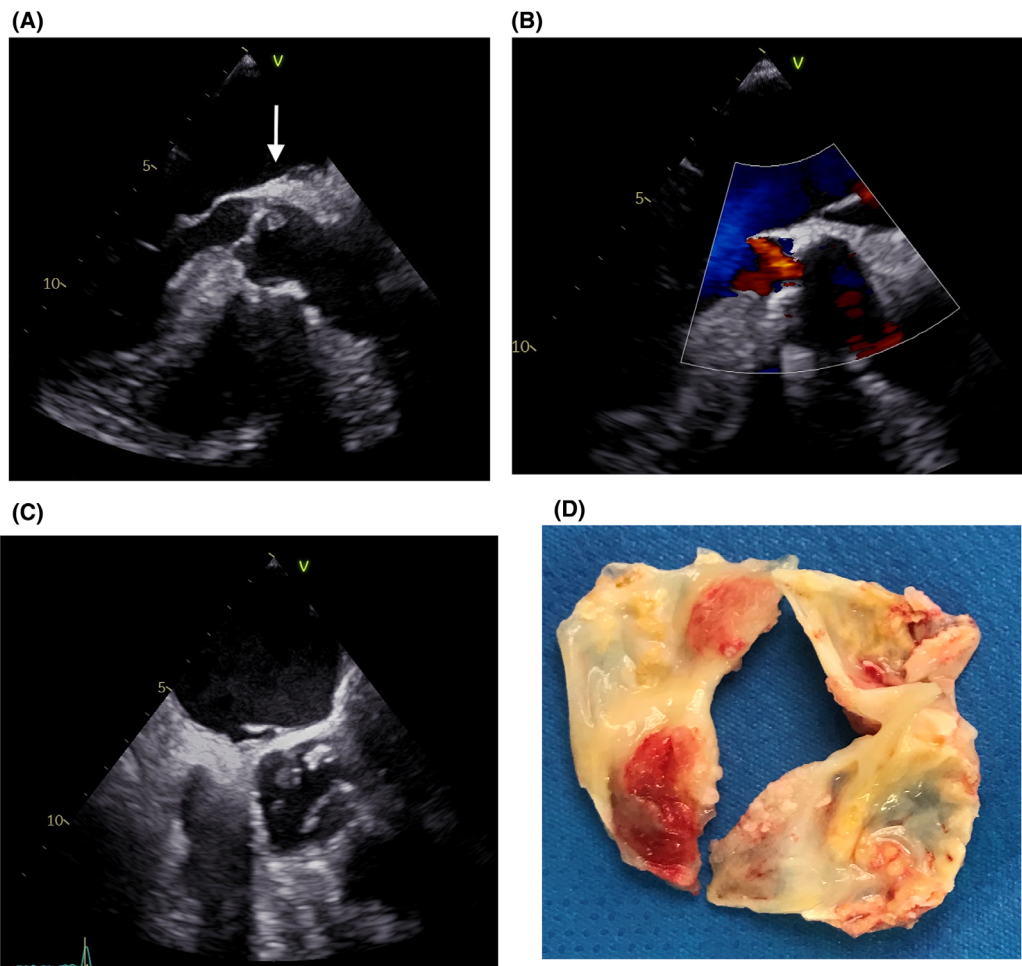
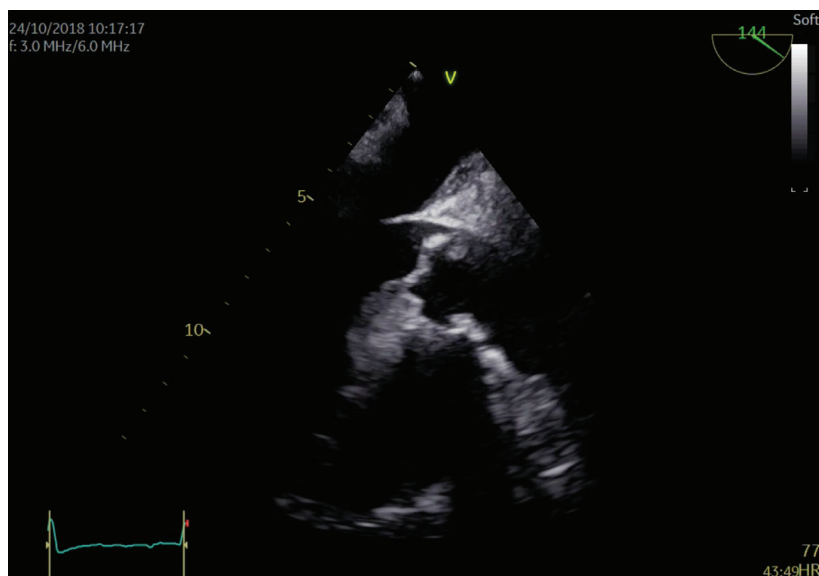


FIGURE 1 Panel A. Transesophageal echocardiography showing a non-oscillating hypoechoic mass on the aortic-side of the aortic valve measuring of 8×12 mm (white arrow); LV: Left Ventricle; Ao: Aorta. Panel B. Transesophageal echocardiography with color Doppler showing mild aortic insufficiency. Panel C. Transesophageal echocardiography showing a hypoechoic mass on the aortic-side of the aortic valve as seen from the short axis view. Panel D. Native bicuspid valve presenting vegetations on the aortic-side of the cusps with fusion of right and left coronary cusps



VIDEO 1 Video of the transesophageal echocardiography showing the non-oscillating hypoechoic mass on the aortic-side of the aortic native bicuspid valve measuring of 8×12 mm

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