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Anterior leaflet repair in tricuspid valve infective endocarditis

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The right-sided disease accounts for 5–10% of all infective endocarditis (IE) cases, but 90% of these involve the tricuspid valve (TV). Right-sided IE is strongly associated with either intravenous drug use or device implants.[1]

A 21-year-old man with the past medical history of heroin abuse, multiple admissions for recurrent bacteraemia and detoxication presented to an outside hospital with acute pneumonia. Two weeks later, he was transferred to our hospital with high fever and progressive shortness of breath. His shock was treated with broad-spectrum antimicrobial cover and vasopressor support. Blood cultures grew *Staphylococcus aureus*, chest computed tomography revealed multiple bilateral lung abscesses. Transthoracic echocardiography showed a vegetation measuring 25 × 20 mm with partial destruction of TV anterior leaflet and massive regurgitation (*Figure 1*). No further valvular lesions were identified on transoesophageal echocardiography; preserved biventricular function and mild pulmonary hypertension were detected.

Given the presence of vegetations over 20 mm which persisted after recurrent pulmonary embolization, and presence of *S. aureus* bacteraemia without improvement despite appropriate antimicrobial treatment, surgery was indicated.[2] On macroscopic inspection, the anterior leaflet was affected by infective process without annular involvement, and decision was made to replace it with bovine pericardial patch and support of neochords (*Figure 2*). To minimize utilization of more potentially infection prone foreign material, the need for annular stabilization was addressed with deVega annuloplasty. After 2 weeks of in-hospital recovery, the patient was

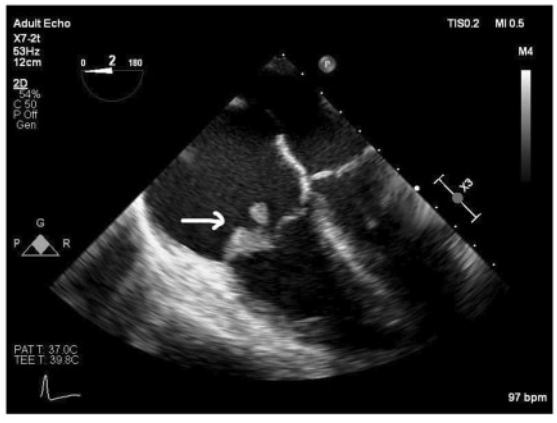

Figure 1 Infective endocarditis affecting the anterior tricuspid leaflet and arrow indicates vegetations.

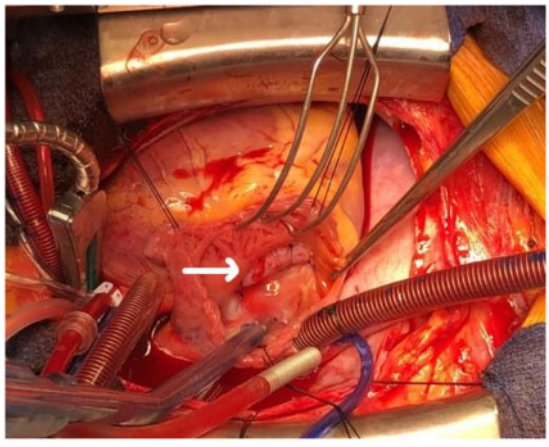

Figure 2 Intraoperative view of the tricuspid valve and arrow highlights the replaced anterior leaflet.

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transferred to a rehabilitation facility and completed 6 weeks antibiotic course. Pre-discharge echocardiography demonstrated structural and functional tricuspid valve with only mild residual regurgitation.

Although non-surgical management is the preferred approach to the majority of TVIE cases, where surgery is indicated, can be performed with low operative mortality and excellent survival.[2] Early intervention prevents further septic embolism and destruction of leaflet tissue; facilitating likelihood of TV repair.[1] Valve repair is protective against recurrent IE.[3]

Supplementary material

Supplementary material is available at *European Heart Journal - Case Reports* online.

Consent: The author/s confirm that written consent for submission and publication of this case report including image(s) and associated text has been obtained from the patient in line with COPE guidance.

Conflict of interest: none declared.

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