

Extensive Vegetation on the Mitral Valve Due to Non-Bacterial Thrombotic Endocarditis

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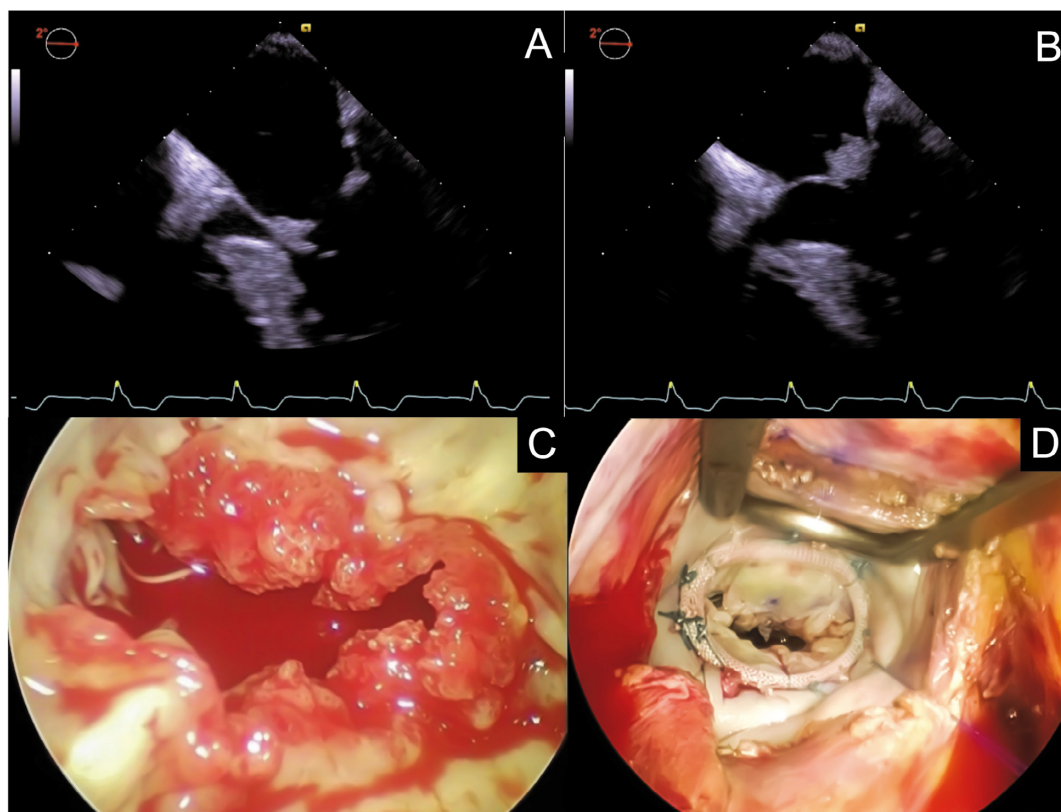


Figure. (A,B) Transesophageal echocardiogram showing large mobile vegetation on the mitral valve leaflets. (C) The anterior and posterior mitral valve leaflets covered with extensive vegetation. (D) The mitral valve after debridement and annuloplasty.

Non-bacterial thrombotic endocarditis (NBTE) is characterized by sterile vegetations comprising fibrin and platelet aggregates on cardiac valves. NBTE is associated with cancer, autoimmune disorders, hypercoagulable states, or other chronic diseases.¹ It is difficult to differentiate NBTE from infective endocarditis when there is no known primary disease.

A 69-year-old man in New York Heart Association Functional Class III was referred for surgery due to severe mitral regurgitation and large mobile vegetations (**Figure A,B; Supplementary Movie 1**). He showed no signs of infection and the blood culture was negative. Hematological examinations revealed disseminated intravascular coagulation with a hyperfibrinolytic state. Computed tomography showed

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no definite cancer. Minimally invasive mitral valve surgery was performed. The mitral valve leaflets were covered with vegetation, which physically hindered leaflet coaptation (**Figure C**), but there was no structural destruction. After thorough debridement of the extensive vegetation, ring annuloplasty and papillary muscle bundling were performed (**Figure D**; **Supplementary Movie 2**). On histopathological examination, the vegetation was found to comprise fibrin without signs of bacterial infection. The patient developed embolic stroke 3 times after surgery despite therapeutic anticoagulation and was discharged home 6 months later. Cervical lymph node biopsy disclosed metastatic lung cancer despite no visible lung tumor on computed tomography. The patient died from aspiration pneumonia 17 months after surgery.

Disclosures

The authors declare no conflicts of interest.

IRB Information

IRB review was waived by the Ethics Committee at the Kitasato Institute due to the nature of this single-case retrospective analysis.

Reference

1. Habib G, Lancellotti P, Antunes MJ, Bongiorni MG, Casalta JP, Zotti FD, et al. 2015 ESC guidelines for the management of infective endocarditis: The Task Force for the Management of Infective Endocarditis of the European Society of Cardiology (ESC). Endorsed by: European Association for Cardio-Thoracic Surgery (EACTS), the European Association of Nuclear Medicine (EANM). *Eur Heart J* 2015; **36**: 3075–3128.

Supplementary Files

Supplementary Movie 1

Supplementary Movie 2

Please find supplementary file(s);
<http://dx.doi.org/10.1253/circrep.CR-22-0043>