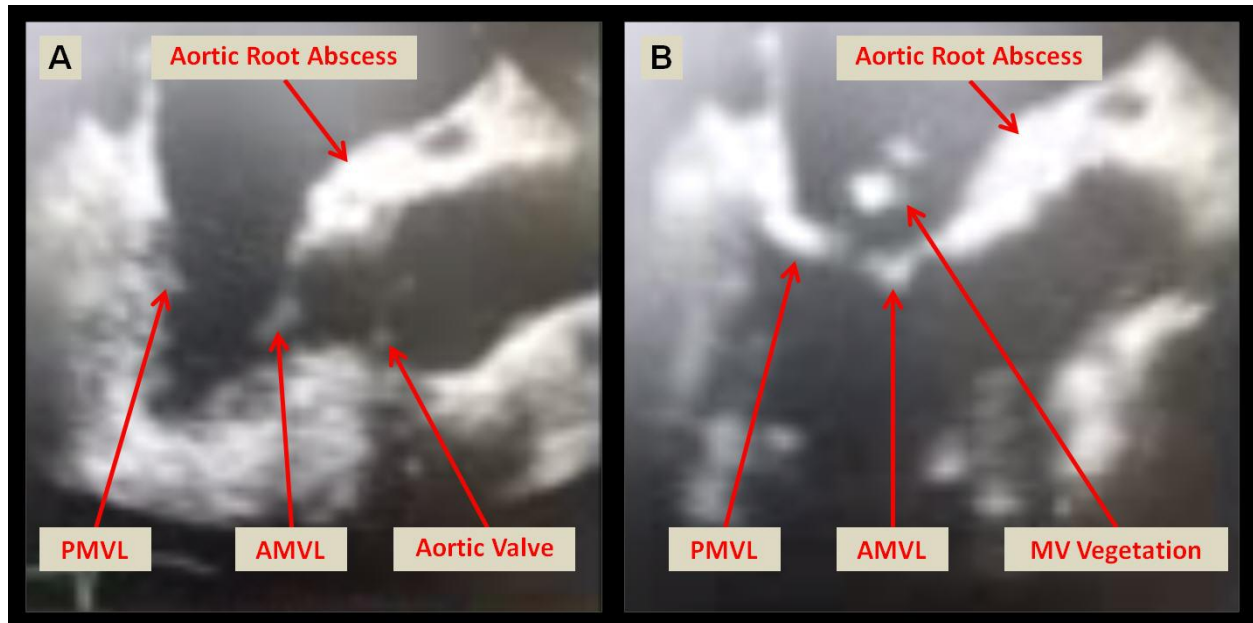


Endocarditis of the Mitral Valve! *And The Vicinity!!*

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Description

The above transesophageal echocardiography images from the mid-esophageal long axis view illustrate a diastolic frame (A) showing the anterior mitral valve leaflet (AMVL) and the posterior mitral valve leaflet (PMVL) in open position, while the aortic valve is in closed position. An aortic root thickening suspicious for abscess is noted. In the systolic frame (B) in addition to the native valvular structures, a mitral valve vegetation is visualized at the coaptation point of both mitral valve leaflets. The aortic root abscess is again visualized as labeled.

The aortic root is a complex structure and consists of the aortic annulus, the sinuses of Valsalva (or aortic sinuses), and the sinotubular junction. The internal structure of the aortic root consists of the aortic valve leaflets, the commissures, and the interleaflet triangles. It is located in close proximity to other cardiac structures, mainly the pulmonary valve anteriorly, the mitral valve to the left and posteriorly, and the tricuspid valve to the right and posteriorly, and, therefore, can be affected by pathology of such structures, including endocarditis or degenerative valve disease [1].

Echocardiography is widely used for the detection and follow-up of aortic root disease, due to its wide availability, relatively low cost, safety, and ability to assess hemodynamic parameters of the aortic valve [2]. Echocardiographic limitations include patient-specific factors (such as body habitus) and operator dependence. Three-dimensional echocardiography and transesophageal echocardiography can overcome some of these

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limitations, allowing for measurements in multiple planes [3].

Aortic root abscess should be suspected in patients with aortic valve endocarditis, especially those who fail to improve within 72 hours on appropriate antibiotic therapy; especially in the presence of a prosthetic valve infection. Persistence or recrudescence of fever, persistently elevated white blood cell counts, other markers of systemic inflammation such as high C reactive protein, or the development of cutaneous manifestations or embolic phenomena while on adequate treatment all indicate uncontrolled infection. A lengthening PR interval on the surface ECG or development of heart block are particularly worrying features, and in the pre echocardiographic era determined the need for urgent surgery [4],

Aortic root abscess is a life threatening complication of both native and prosthetic valve infection, which requires coordinated and experienced management [5]. Once an aortic root abscess is detected, urgent surgery is required as antibiotics alone will fail to control the infection while surgery may be curative. There is increased morbidity and mortality when surgery is delayed [6].

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