

IMAGES AND VIDEOS

# Unique characterization of complex endocarditic vegetations using 3D TOE

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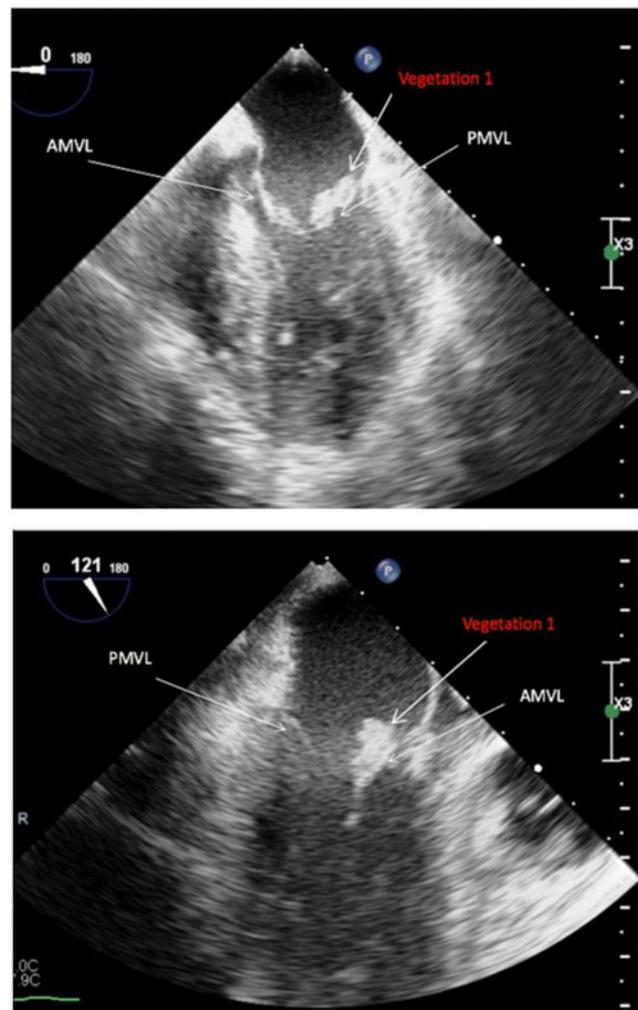
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## Summary

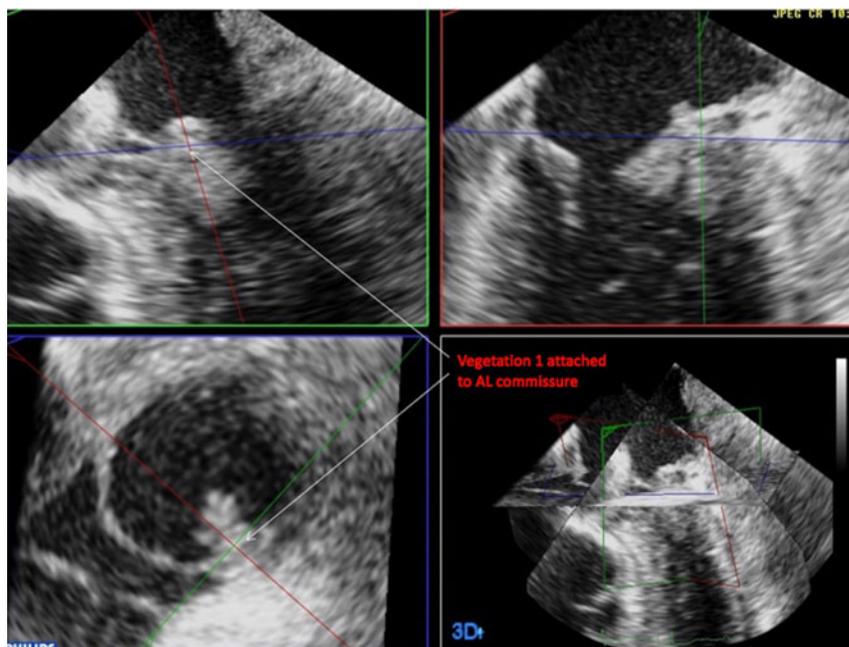
A 31-year-old male was admitted with suspected infective endocarditis, given a history of i.v. drug use, lung and cerebral abscesses and *Staphylococcus aureus* bacteraemia. TTE imaging was limited given supine positioning and mechanical ventilation but suggested a posterior mitral valve leaflet (PMVL) mass. Three-dimensional TOE provided uniquely detailed assessment of two complex infective masses. The attachment of the presumed P2 mass on TTE was indeterminant even on 2D-TOE, appearing attached to the PMVL or AMVL depending on rotational view (Fig. 1). 3D-TOE imaging and subsequent multiplanar and volume-rendered reconstruction revealed this to be a complex, large vegetation attached to the anterior aspect of the anterolateral commissure with mobile heads prolapsing into the left atrium and causing mild mitral regurgitation through a small basal perforation (Figs 2, 3 and Video 1). The second mass was a filamentous vegetation attached to the LVOT, prolapsing towards but not contacting the aortic valve (Fig. 4 and Video 2). Comprehensive assessment of complex vegetations is crucial for optimal surgical planning. 3D-TOE allows rapid, accurate, unique assessment of such masses through unlimited multiplanar reconstructions, volume-rendered real-time imaging and colour full-volume regurgitation assessment which may not always be possible on 2D-TTE or 2D-TOE. 3D imaging should be routinely used in TOE and in particular in suspected endocarditis.

## Video 1

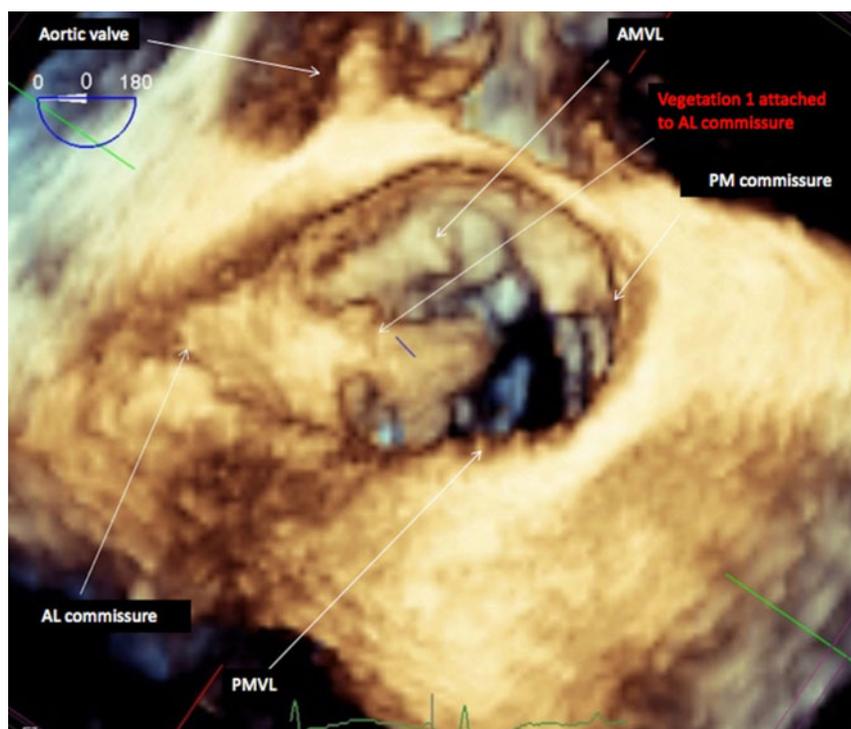
MV vegetation. View Video 1 at <http://movie-usa.glencoesoftware.com/video/10.1530/ERP-19-0062/video-1>.



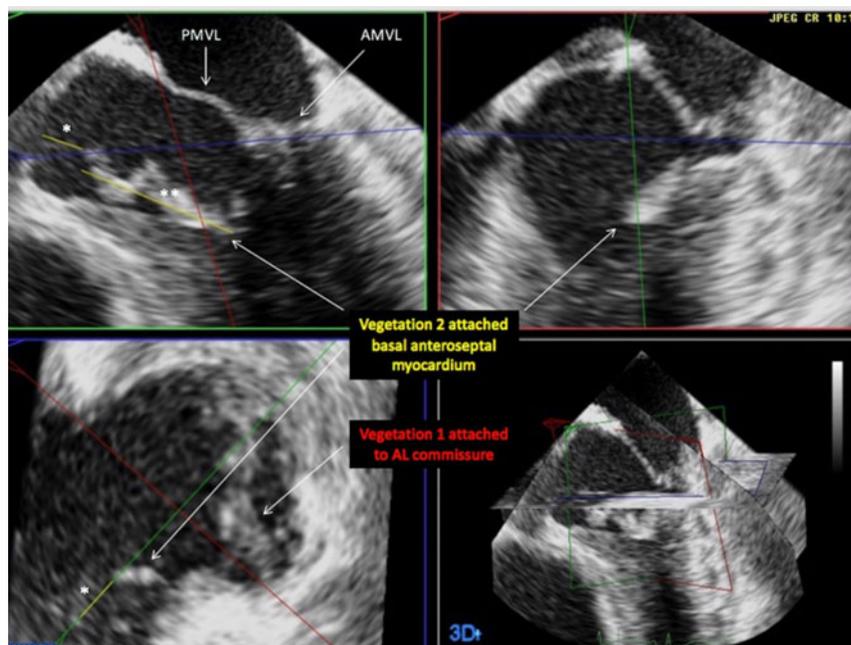
**Figure 1**  
Indeterminate attachment of the valvular vegetation (vegetation 1) on 2D-TOE.



**Figure 2**  
3D multiplanar reconstruction.



**Figure 3**  
3D volume-rendered reconstruction.



**Figure 4**  
Vegetation 2 attached to the basal anteroseptal myocardium.

## Video 2

LVOT vegetation. View Video 2 at <http://movie-usa.glencoesoftware.com/video/10.1530/ERP-19-0062/video-2>.

## Declaration of interest

The authors declare that there is no conflict of interest that could be perceived as prejudicing the impartiality of this article.

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## Patient consent

The patient gave written informed consent for publication.

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