

# Destructive bacterial endocarditis of critically stenotic aortic valve with transformation to florid aortic regurgitation with massive abscess presenting without septic symptoms

A 74-year-old woman with known critical aortic stenosis presents to hospital with acute, severe dyspnoea.

The patient had presented 3 months earlier with dyspnoea on exertion. Critical calcific aortic stenosis was diagnosed on echocardiography with an aortic valve area of  $0.44 \text{ cm}^2$  and mean pressure gradient of 54 mm Hg (figure 1A). She was referred to a cardiac surgeon for aortic valve replacement, but was initially managed conservatively.

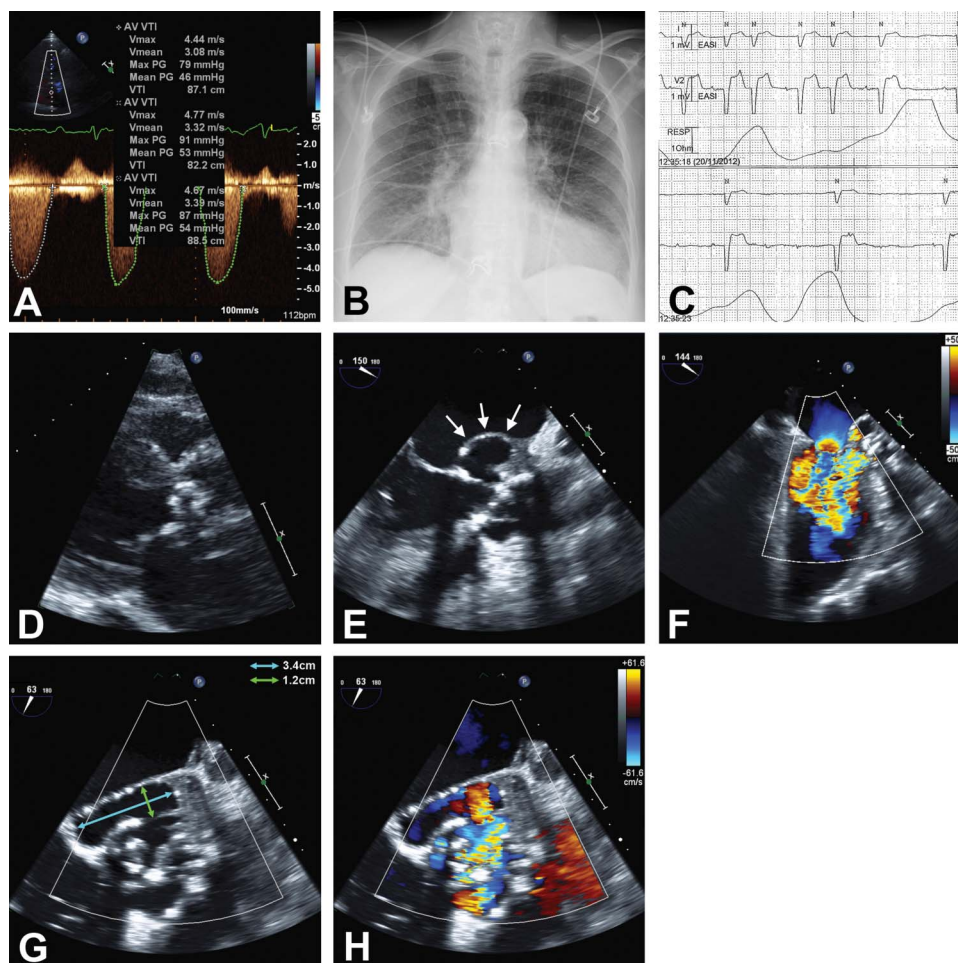
She was afebrile. Pulse was 120 bpm; BP 90/30. On auscultation, there were ejection systolic and early diastolic murmurs, and bilateral crackles, consistent with pulmonary oedema. Chest x-ray confirmed this (figure 1B). There were no stigmata of infective endocarditis. Full blood count and electrolyte profile were normal. Blood cultures were collected due to the murmurs, despite the absence of fever or septic symptoms.

Initial management consisted of oxygen, diuretics and admission to the coronary care unit. Intermittent complete heart block was noted (figure 1C).

Transthoracic echocardiography showed florid aortic regurgitation. Two mobile pedunculated masses were seen, consistent with vegetations (figure 1D).

Initial blood cultures grew *Enterococcus faecalis*. Further cultures were collected and subsequent growth confirmed the diagnosis of destructive *E faecalis* endocarditis.

The transoesophageal echocardiogram revealed two vegetations with a massive abscess measuring  $3.4 \times 1.2 \text{ cm}$  (figure 1E,G). Severe aortic regurgitation was demonstrated (figure 1F). This abscess was communicating with the ascending aorta and was bulging towards the left atrium with a thin cap (figure 1H).



**Figure 1** (A) Previous transthoracic echocardiogram demonstrating severe aortic stenosis. Presenting chest x-ray shows pulmonary oedema (B) and initial telemetry monitoring documented intermittent complete heart block (C). Transthoracic echocardiogram with two pedunculated masses on the aortic valve, consistent with vegetations (D). Transoesophageal echocardiogram (E–H) with large, bulging abscess (E, white arrows); severe aortic regurgitation (F) and communication between the abscess and the ascending aorta (G,H).

The patient continued to deteriorate and was referred for urgent surgery. She successfully underwent debridement of the abscess and aortic root replacement with a Dacron graft and aortic valve replacement.

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