

## Multimodality imaging in *Granulicatella* endocarditis

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A 59-year-old man presented with right flank and buttock pain. Magnetic resonance imaging of the pelvis demonstrated right sacroilitis (**See Figure 1: A, circle**) and myositis without obvious abscess (**B, arrow**). Blood cultures subsequently grew *Granulicatella adiacens* which was sensitive to penicillin MIC 0.064 mg/L.

Echocardiography showed a dilated ascending aorta measuring 4.9 cm and a functional bicuspid aortic valve with a 6 mm × 9 mm mobile mass on the ventricular aspect of the non-coronary cusp consistent with vegetation (**C, D, arrows**).

Severe aortic regurgitation was noted which is likely chronic as the ventricle was dilated at 6.1 cm. Computed tomography (CT) of aorta confirmed a severely dilated aortic sinus measuring 5.0 cm (**E**).

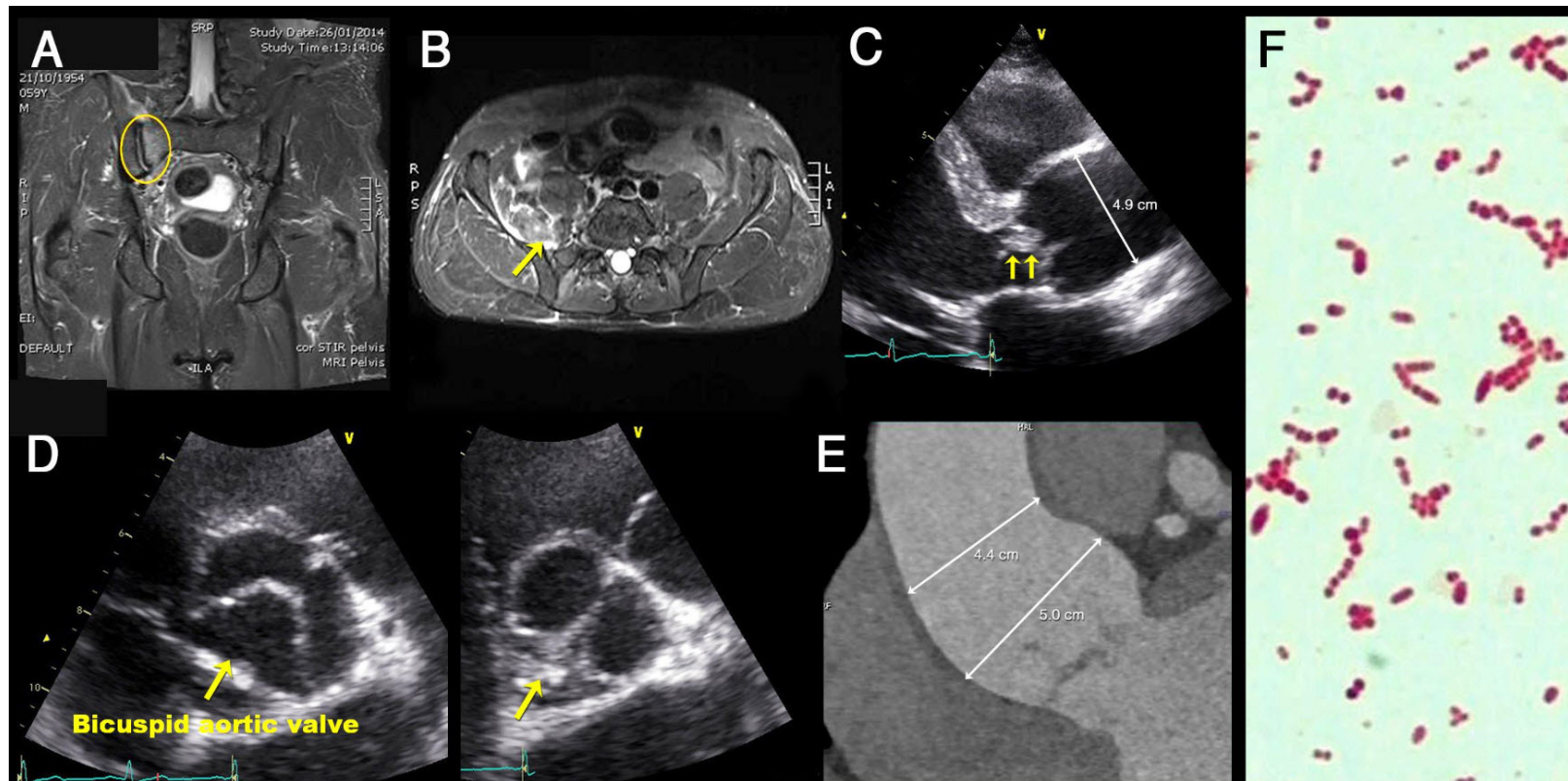
CT angiography showed mild eccentric calcified atherosclerotic plaque in the left anterior descending artery. He underwent aortic root replacement and recovered well.

*Granulicatella adiacens* (**F**) is a nutritionally variant streptococcus associated with high morbidity and mortality in endocarditis. Early surgical intervention should be considered when *Granulicatella adiacens* endocarditis is diagnosed.

This case highlights the utility of multimodality imaging in the evaluation of patients with endocarditis and in guiding treatment.

### Learning points

- Embolisations are frequent in *Granulicatella adiacens* endocarditis and therefore possess a diagnostic and management challenge to clinicians.
- Pre-existing cardiac pathology is a risk factor in endocarditis due to *Granulicatella* and most commonly affects aortic and mitral valves.



**Figure 1** (A) There was abnormal increased signal intensity within the right sacroiliac joint and in the adjacent sacral bone marrow (circle) on T2-weighted imaging (STIR) consistent with right sacroiliitis; (B) Similarly, there was also increased signal intensity around and in between the muscle fibres of the right iliacus muscle superiorly (arrow) on T2-weight imaging (STIR) consistent with myositis; (C) Transthoracic echocardiography revealed a 6 mm × 9 mm mobile globular echogenic mass (yellow arrows) on the ventricular aspect of the aortic valve. The ascending aorta was also dilated at 4.9 cm; (D) On parasternal short axis view of the aortic valve, the aortic valve had three leaflets but was functionally bicuspid (arrow) with fused left and right coronary cusps. The mobile mass (arrow) was attached to the ventricular aspect of the non-coronary cusp; (E) Computed tomography (CT) of the aorta confirmed a severely dilated aortic sinus measuring 5.0 cm and the sinotubular junction measured 4.4 cm; (F) *Granulicatella adiacens* is a Gram-positive bacterium with streptococcus morphology which appears as cocci, coccobacilli or rod-shaped cells (from Christensen JJ, Facklam RR. *Granulicatella* and *Abiotrophia* species from Human Clinical Specimens. J Clin Microbiol. 2001;39(10):3520–3523.

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