

## Inflammatory reaction of a pericardial foreign body after cardiac surgery

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### CASE PRESENTATION

A 74-year-old man, who had undergone an aortic valve replacement for aortic regurgitation at the age of 57 and atrioventricular node ablation for refractory paroxysmal atrial flutter and concurrent pacemaker implantation at the age of 65, was admitted to our hospital due to fatigue and exertional dyspnea. He was diagnosed as constrictive pericarditis by cardiac catheterization, which has shown a dip-and-plateau sign of ventricular diastolic pressure. Subsequently, pericardiectomy was performed. At postoperative period, however, elevated levels of C-reactive protein (CRP) were sustained (4.5 to 12.0 mg/dL) and his symptoms were not improved. Whereas there was an unclear lesion evident on the chest X-ray as it overlapped the cardiac silhouette (Figure 1A), the computed tomography (CT)

scan and three-dimensional (3D) reconstruction revealed a characteristic whirl-like radio-opaque foreign body, suggesting the retained surgical gauze pad (Figure 1B, C, and F; yellow arrows; Supplementary Data). At the same location, 18F-fluorodeoxyglucose (FDG)-positron emission tomography combined with CT or 3D-CT demonstrated intense FDG uptake in the foreign body, indicating an inflammatory reaction (Figure 1D, E, and G; red arrows; Supplementary Data), which we decided to surgically remove. The foreign body was identified as gauze without abscess (Figure 1H). After removal of the foreign body, his symptoms were diminished and CRP levels decreased from 12.0 to 2.6 mg/dL. The patient was discharged without other events.

Cotton gauze may lead to exudative inflammatory reaction and have catastrophic implications for patient.

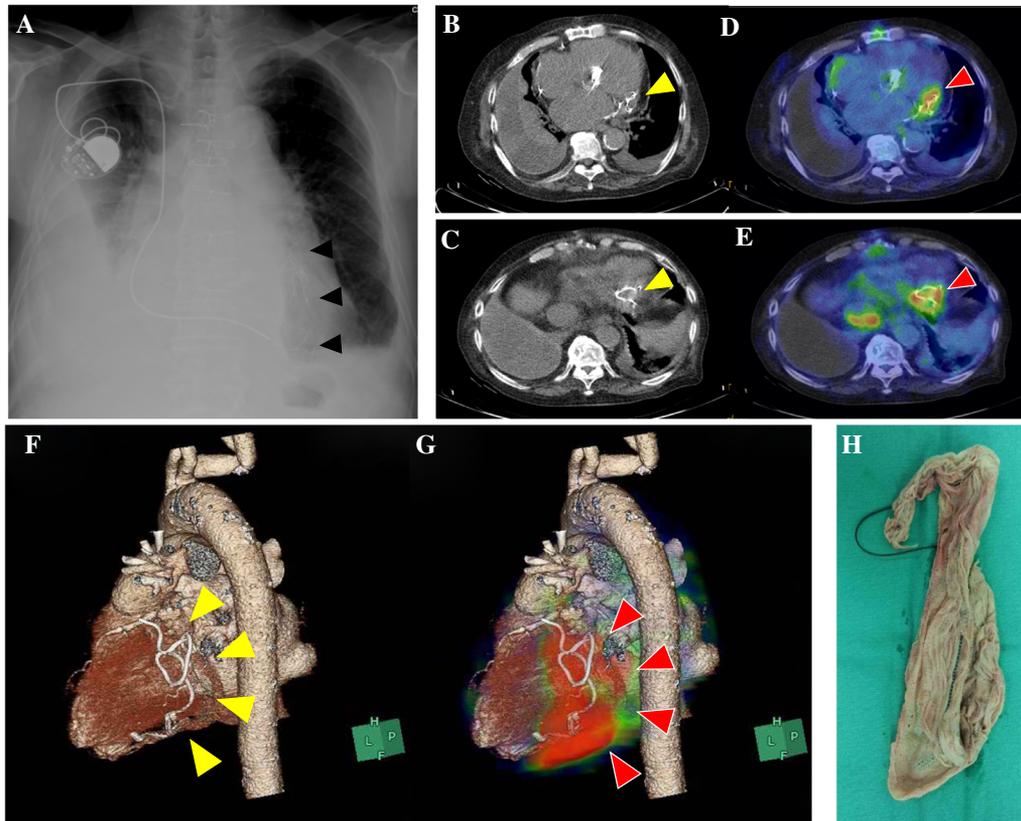
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**Figure 1.** **A** There was an unclear lesion evident on chest X-ray (arrows). **B**, **C**, and **F** Computed tomography (CT) and three-dimensional reconstruction of this scan revealed a radio-opaque foreign body (yellow arrows). **D**, **E**, and **G** 18F-fluorodeoxyglucose (FDG)-positron emission tomography combined with CT and 3D CT demonstrated intense FDG uptake in the foreign body (red arrows). **H** Postoperatively retained surgical gauze.

Therefore, early detection of inflammatory activity in retained surgical gauze and its removal are clinically important. However, plain radiographic frontal view of the chest is not sufficient to detect the foreign body. FDG-PET combined with CT is a useful modality to detect a foreign body and its inflammatory reaction at the same scan.

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### Disclosures

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