



Case report

Sternoclavicular joint osteomyelitis extending to lung abscess complicated by Staphylococcal infective endocarditis



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Description

A 72-year-old man presented with the right chest pain. Two weeks before admission, he had visited an orthopedic clinic and was prescribed analgesics; however, the chest pain did not improve and the patient developed a productive cough. He had aortic regurgitation, but no history of trauma, diabetes mellitus, immunocompromised status, or drug abuse. Clinical examination revealed high-grade fever, and swelling and tenderness in the right sternoclavicular joint, with notable crepitance. Contrast-enhanced computed tomography revealed fluid accumulation in the right upper pulmonary lobe with an air-fluid level, and some air bubbles scattered along the right anterior chest wall (Fig. 1). T1-weighted contrast-enhanced magnetic resonance imaging (MRI) with fat suppression revealed bone erosion around the right sternoclavicular joint, with surrounding edema (Fig. 2A), as well as bone marrow edema along with cortical irregularity of the medial end of the right clavicle (Fig. 2B). Blood and sputum cultures were positive for methicillin-sensitive *Staphylococcus aureus*. Transesophageal echocardiography revealed a vegetation in the aortic valve. Consequently, the diagnosis of lung abscess and sternoclavicular joint osteomyelitis, complicated by infective endocarditis was made. Antimicrobial therapy for 8 weeks resulted in clinical improvement and complete disappearance of the cavitory lesions.

At initial diagnosis, it was unclear whether the initiating event was infective endocarditis, primary pulmonary infection, or sternoclavicular joint infection. However, we believe an inflammatory process spreading from the right sternoclavicular joint, with osteomyelitis, extending along the chest wall to the right upper pulmonary lobe, resulted in the lung abscess. This was based on the antecedent history of right chest pain, pulmonary symptoms, and MRI findings. Sternoclavicular joint osteomyelitis, mainly caused by *Staphylococcus* spp., occurs in immunocompromised hosts, but rarely in healthy adults [1]. It leads to serious complications, such as chest wall and lung abscess, mediastinitis, and pyomyositis, with increased mortality [2–4]. Surgical management is often required [5]; however, in this case, long-term antimicrobial therapy was initiated due to complications arising from

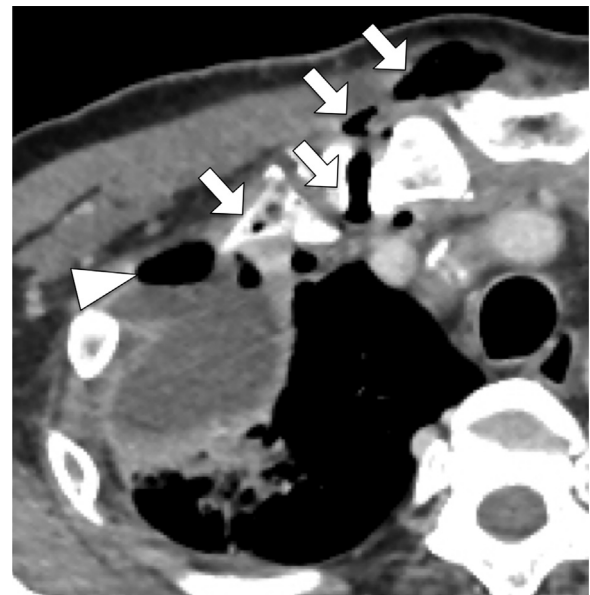


Fig. 1. A chest computed tomography on admission revealed fluid accumulation in the right upper pulmonary lobe with an air-fluid level (arrowhead), with air expanded to the right sternoclavicular joint (arrows).

Staphylococcal infective endocarditis. Successful treatment without surgery was achieved. Sternoclavicular joint osteomyelitis should be considered in patients with lung abscess in the upper lobes, complicated with chest pain.

Funding

None.

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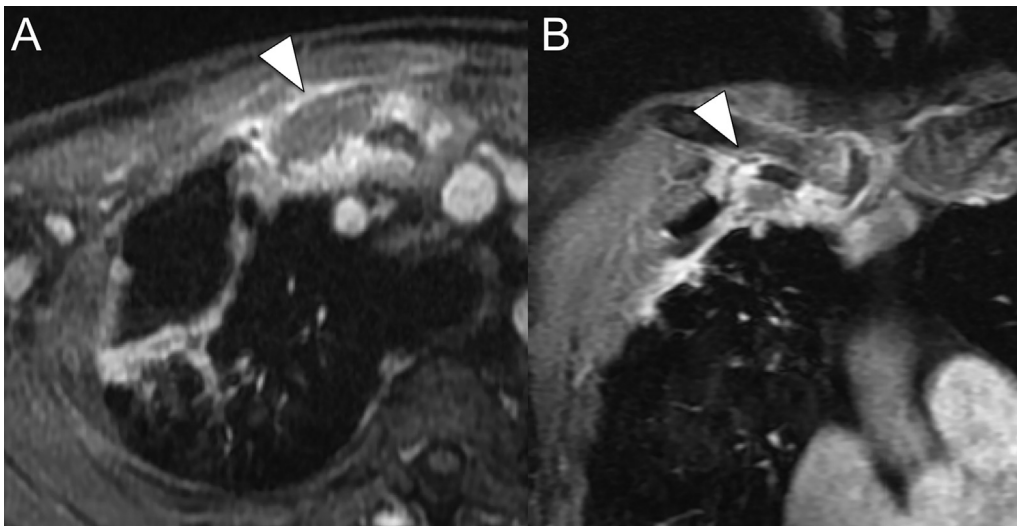


Fig. 2. Axial image (A) and a coronal image (B) of T1-weighted contrast-enhanced magnetic resonance imaging with fat suppression showed bone erosion around the right sternoclavicular joint, and bone marrow edema along with cortical irregularity of the medial end of the right clavicle.

Conflict of interest

None.

References

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