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Medical Imagery

Cold abscess of the chest wall: A diagnostic challenge

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ABSTRACT

Tuberculosis of the chest wall represents less than 5% of cases of musculoskeletal tuberculosis. We present the case of a patient with a cold abscess in the pectoral region due to *Mycobacterium tuberculosis*. A 29-year-old male of Senegalese origin reported a progressive increase in size of the right hemi-thorax without trauma or previous effort. A liquid collection of 14 cm on the major axis, between the pectoralis major muscle and the costal wall, was demonstrated on magnetic resonance imaging. Surgical debridement revealed a marked granulomatous inflammatory reaction with focal necrosis; PCR was positive for *M. tuberculosis* complex and culture subsequently grew *M. tuberculosis* complex. Specific treatment for tuberculosis achieved a good clinical outcome. The diagnosis of tuberculosis of the chest wall is always difficult, being a clinical challenge.

Case report

A 29-year-old Senegalese male with no medical history was evaluated because of a painful progressive increase in size of the right hemi-thorax without trauma or previous effort (Figure 1). Chest radiography showed an increase in size of the soft parts in the right pectoral region (Figure 2), and soft tissue ultrasound suggested a haematoma. After rehabilitation treatment, his clinical condition remained unchanged. Drainage showed only a purulent sterile liquid. Osteomuscular magnetic resonance imaging revealed a liquid collection of 14 cm on the major axis, between the right pectoralis major muscle and the costal wall, with a thick capsule and a solid component (Figure 3). Anatomopathological study of surgical debridement showed a marked granulomatous inflammatory reaction with focal necrosis; PCR was positive for *Mycobacterium tuberculosis* complex and culture subsequently grew *M. tuberculosis* complex. A four-drug treatment regimen was initiated with a good clinical outcome.

Figure 1. Increased size of the right hemi-thorax.

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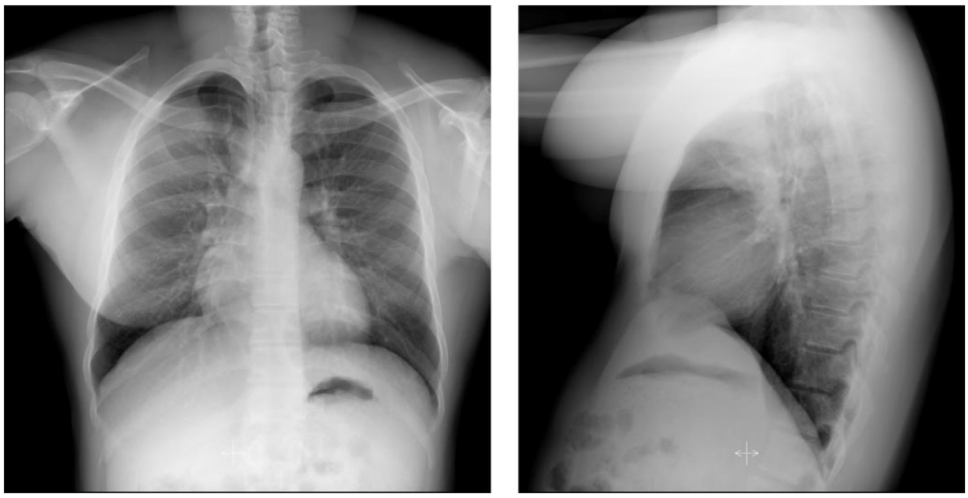

Figure 2. Chest X-ray showing an increased size of the soft parts in the right pectoral region without any change in the lungs.

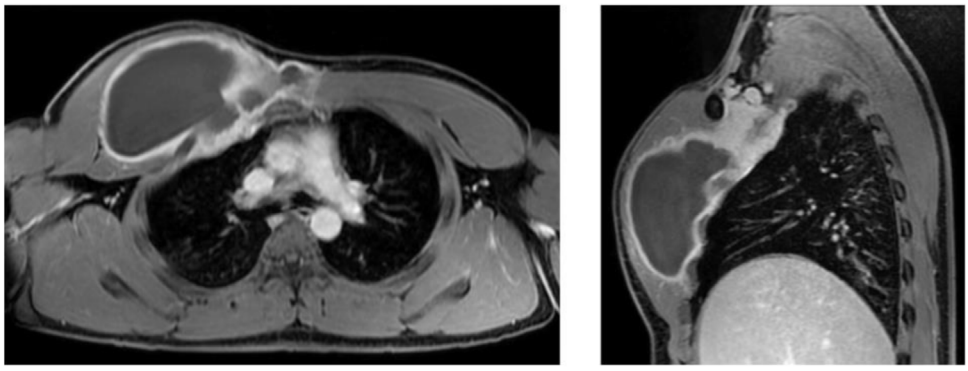

Figure 3. Osteomuscular magnetic resonance imaging showing a liquid collection of 14 cm on the major axis, between the pectoralis major muscle and the costal wall, with a thick capsule.

Discussion

Cold abscess of the chest wall is an infrequent manifestation of tuberculosis and is often misdiagnosed (Mathlouthi et al., 1998). The portal of entry is usually haematogenous, lymphatic, local extension, or secondary to a breast abscess, tuberculosis lymphadenitis, or chondrosternal involvement (Teo et al., 2009).

A definitive diagnosis is made by pathological study and/or a positive culture, with a high rate of false-negatives in the former (Kalaç et al., 2002). PCR is rapid and specific but has a low sensitivity in extrapulmonary specimens from smear-negative cases (63%) (Zeka Arzu et al., 2011). The management of tuberculosis thoracic abscess is controversial; it appears that the combination of standard chemotherapy and surgery is the best choice (Faure et al., 1998).

Patient consent

Written informed consent was obtained from the patient.

Funding source

None.

Conflict of interest

No conflict of interest to declare.

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