

Parascapular mass revealing primary tuberculosis of the posterior arch

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Abstract: We report the case of a parascapular abscess revealing primary tuberculosis of the posterior arch in a 31-year-old man. Sectional imaging is essential in order to detect the different lesions of this atypical spinal tuberculosis as osteolysis of the posterior arch extendible to vertebral body, osteocondensation, epidural extension which is common in this location, and high specificity of a zygapophysial, costo-vertebral or transverse arthritis.

Keywords: Muscular abscess; tuberculosis of the posterior arch; spinal tuberculosis

Submitted Jun 17, 2016. Accepted for publication Jul 25, 2016.

doi: 10.21037/qims.2016.07.09

View this article at: <http://dx.doi.org/10.21037/qims.2016.07.09>

A 31-year-old African American man with no particular medical history presented with 6-month history of extensive soft tissue swelling in the right scapula and weight loss of 10 kg. The clinical examination revealed a renitent, painless mass near the right scapula, with no abnormalities of the skin, lymph nodes or neurological examination. The chest X-ray showed osteolysis of the posterior arch of the 6th right rib, adjacent to the scapular mass (*Figure 1*). On computed tomography scan, osteolysis was centered on a large collection within the rhomboid muscle with contrast enhancement of the peripheral wall compatible with an abscess containing declivitous calcification. The large mass was connected to a pleural and prevertebral abscess associated to Th6 spondylitis with bony sequestrum (*Figure 2*). On magnetic resonance imaging exam, the abscess was isosignal T1 compared to paravertebral muscle with thin and intense enhancement on T1 weighted sequence with fat saturation after gadolinium injection (*Figure 3*). The spondylitis of Th6 was linked to a right costo-vertebral arthritis with bone erosions, intense oedema and hypertrophic synovitis complicated with right epiduritis. The morphology and signal of Th5–Th6

disk were normal without argument for a discitis. The diagnosis of tuberculosis abscess was confirmed after surgical drainage of the parascapular mass and culture of the purulent liquid which revealed mycobacterium tuberculosis infection. Therapeutic management included surgery with antitubercular quadri-therapy that led to a progressive return to the initial weight within 6 months and recovery without sequelae. The isolated involvement of the posterior arch characteristically arises with tuberculosis compared to pyogenic spondylitis (1) but represents an atypical pattern that accounts for one to 37% of spinal tuberculosis (2). It mainly occurs at the cervico-thoracic level with frequent epidural abscess and spinal cord compression (3). At imaging, the diagnosis is difficult on X-ray with an important proportion of false-negative cases (more than 90%) (3). Sectional imaging is essential in order to detect the different lesions of this atypical spinal tuberculosis as osteolysis of the posterior arch extendible to vertebral body (2), osteocondensation, epidural extension which is common in this location, and high specificity of a zygapophysial, costo-vertebral or transverse arthritis (4). The main complication is the spinal instability that must

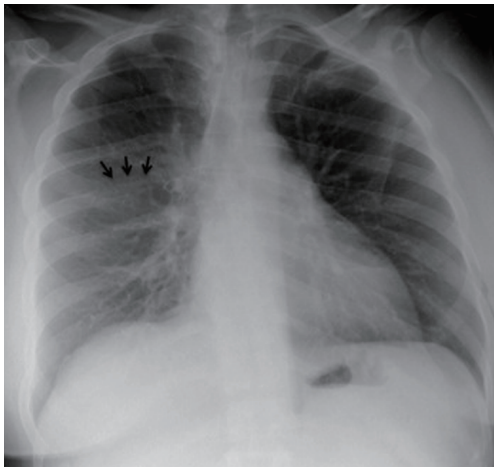


Figure 1 Antero-posterior chest X-ray showing osteolysis of the posterior arch of the 6th right rib (black arrows).

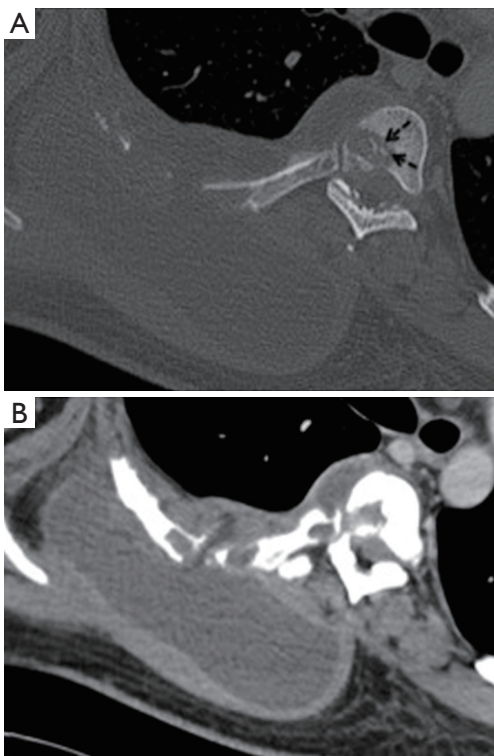


Figure 2 Axial computed tomography at the Th6 level showing osteolysis of the posterior arch of the 6th right rib (A) centered on a large collection in the rhomboid muscle with enhancement of the peripheral wall (B) extended to the pleural space. There is also osteolysis of the Th6 vertebral body with bony sequestrum (black arrows).

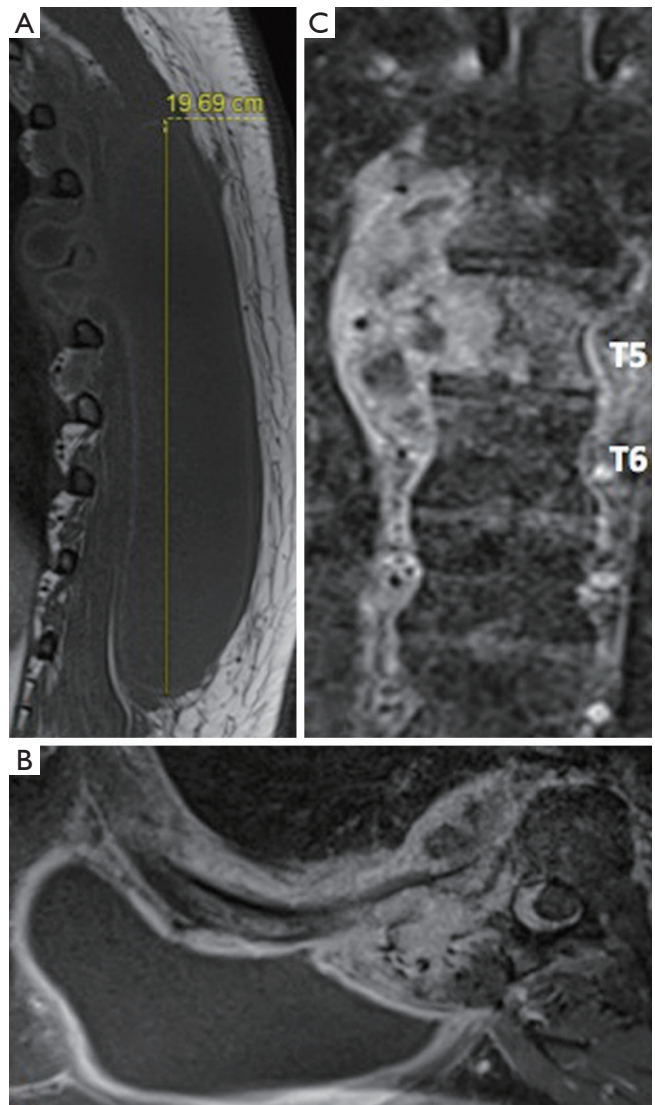


Figure 3 Magnetic resonance imaging centered at the Th6 level. Sagittal T1 weighted sequence shows a 19 cm abscess, in isosignal T1 compared to the paravertebral muscle (A) with thin and intense enhancement of the peripheral wall after gadolinium injection in the axial plane with fat saturation (B). Arthritis of the right Th6 costo-vertebral joint with right epiduritis and bone oedema of the right transverse process extended to the rib is also visible (B). Coronal T1 weighted sequence with fat saturation after gadolinium injection shows Th6 spondylitis without signal abnormality of the Th5-Th6 disk (C).

be anticipated and eventually treated by surgery (3). Differential diagnoses include metastasis, primary bone tumors and hydatid disease.

Acknowledgements

None.

Footnote

Conflicts of Interest: The authors have no conflicts of interest to declare.

Informed Consent: Written informed consent was obtained from the patient for publication of this manuscript and any accompanying images.

Cite this article as: Arbault A, Ornetti P, Loffroy R, Chevallier O, Avril J, Pottecher P. Parascapular mass revealing primary tuberculosis of the posterior arch. *Quant Imaging Med Surg* 2016;6(4):454-456. doi: 10.21037/qims.2016.07.09

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