

## Tuberculous Osteomyelitis of the Scapula- A Case Report

Ajit Ramakant Mahale<sup>1</sup>, Merwyn Fernandes<sup>2</sup>, Chanabasappa Chavadi<sup>3</sup>, Pallavi Rao<sup>4</sup>,  
Suprasanna Ravikiran<sup>5</sup>, Sonali Prabhu<sup>6</sup>

### **ABSTRACT**

Tuberculous osteomyelitis of the scapula is a rare clinical entity. We report a case of tuberculous osteomyelitis of the scapular spine with a breach in the posterior cortex with internal sequestrum and cloaca formation. This case also illustrates abscess formation that is extending from the posterior cortex through the deltoid muscle into the deep fascia, subcutaneous tissue and into the superficial skin with skin deformity.

**Key Words-** Osteomyelitis, scapula, Tuberculosis

<sup>1-6</sup>Department of Radio diagnosis, Kasturba Medical College, Manipal University, Mangalore, Karnataka, India

Corresponding author mail:ajitmahale137@gmail.com

**Conflict of interest: None**

### **INTRODUCTION**

We report a case of tuberculous osteomyelitis of the spine of scapula with abscess formation. In the literature only a few cases have been reported involving the acromion <sup>[1]</sup> and other three the body of scapula <sup>[2][3][4]</sup>.

### **CASE REPORT**

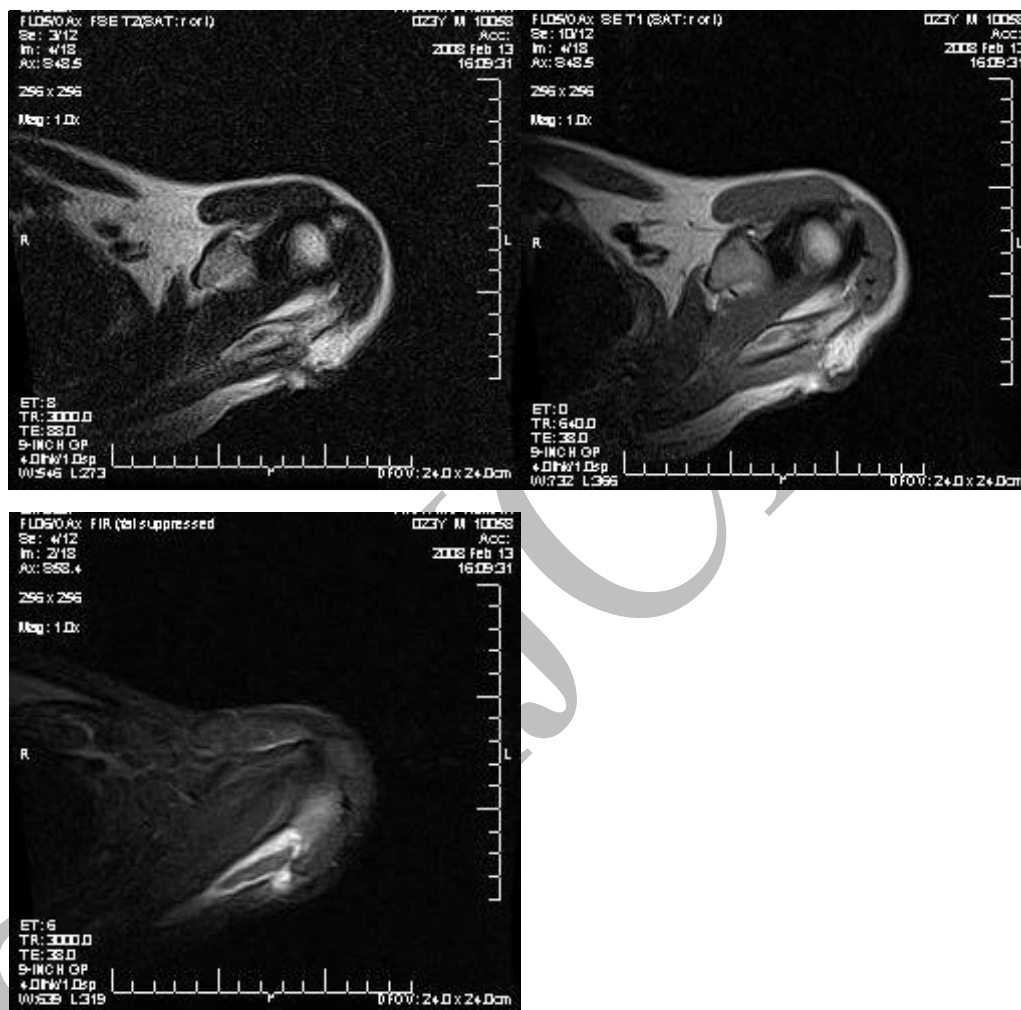
A twenty year old healthy male presented with swelling with pain and discharge from the upper left scapular region from the last two months. The history goes two months back while he was playing and sustained a trivial injury over his left upper back resulting in swelling and severe pain at the site of injury. The swelling was small in size and gradually increased in size. The swelling

was associated with severe pain especially while moving the left shoulder joint. After a few days there was discharge oozing out of the swelling at the site of injury. Discharge was watery in consistency to start with and later became thick blood stained. There was no history of fever, weight loss, chronic cough etc. no chest complaints or any constitutional symptoms. No history of tuberculosis in his family members.

On examination, swelling was diffuse, soft, cystic and tender with restricted mobility at the left shoulder joint and superior- lateral aspect of the chest wall. Skin over the swelling was reddish with a discharging sinus with pus oozing out. Temperature was raised. Bruit or any

pulsation was not present in the swelling. Blood profile showed HB 12gms% and ESR was raised to 50mm/hr. other investigations were normal. The plain PA

chest radiograph was normal, hence we decided to do MRI of the left shoulder [Figure 1].



**Figure 1:** MRI T2,T1&PDFS IMAGES showed altered signal intensity within the scapular spine with a breach in the posterior cortex and extending through the deltoid muscle into the deep fascia, subcutaneous tissue and into the superficial skin with skin deformity.

A MRI of the left shoulder with scapula was performed and it showed altered signal intensity within the scapular spine with a breach in the posterior cortex and extending through the deltoid muscle

into the deep fascia, subcutaneous tissue and into the superficial skin with skin deformity. There was marginal enhancement along the walls with sinus tract on post contrast images .

Few sections of CT were taken and it showed a large cystic area with internal

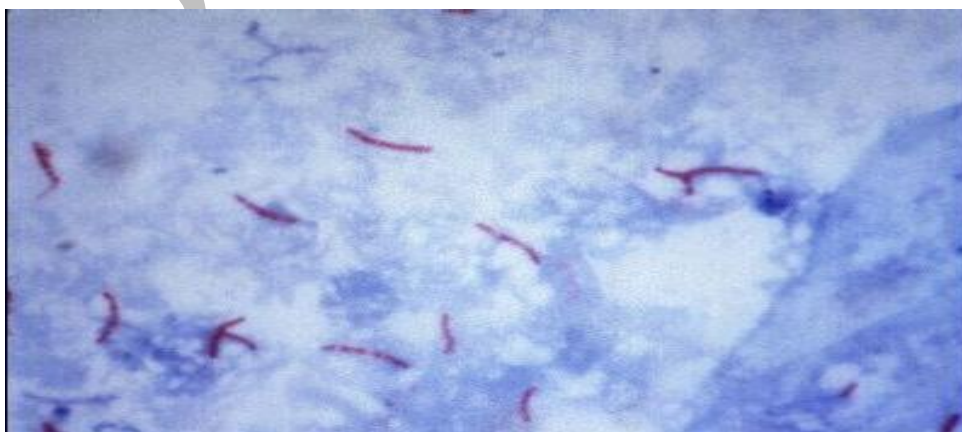
increased attenuation and posterior cortical breach in the scapular spine <sup>[3]</sup>. (Figure 2)



**Figure 2-** CT showed a large cystic area with internal increased attenuation and posterior cortical breach in the scapular spine.

The MRI findings along with CT correlation were suggestive of sub-acute osteomyelitis with internal sequestrum and cloaca formation in spine of scapula .

Based on the history, clinical examination and CT and MRI findings patient was diagnosed to have tubercular osteomyelitis and was put on anti-tubercular regimen. Ziehl-Neelsen stain from the discharge pus showed Acid-Fast bacilli which confirmed the diagnosis <sup>[4, 5]</sup> (Figure 3).



**Figure 3:** A 24yrs old male with tuberculous osteomyelitis. Ziehl-Neelsen stain from the discharge pus showed Acid-Fast bacilli.

### **DISCUSSION**

Tuberculosis, including skeletal tuberculosis, is an ancient infection based upon evidence from archaeological remnants. Typical features of spinal TB have been identified in Egyptian mummies dating back to almost 4000 BC. Mycobacterium tuberculosis was revealed by DNA analysis in a vertebral lesion of a young girl who lived about 1000 AD<sup>[1]</sup>.

Tuberculous osteomyelitis involving the flat membranous bones is extremely rare. Tuberculosis of scapula is also very rare, only a few cases of tubercular osteomyelitis of scapula have been reported till date and all these were associated with other forms of tuberculous osteomyelitis<sup>[2][3][4]</sup>. While the most common site of osseous involvement is the spine, followed by the femur, tibia and the small bones of the hands and feet, any bone can potentially be affected<sup>[1,5,6,7]</sup>. The most common presenting symptoms of Tuberculous osteomyelitis are non-specific pain and swelling.

In our patient trivial injury lead to the formation of the abscess with osteomyelitis with no other primary focus. The patient has no chest complaints or any

form of pulmonary involvement or signs and symptoms of tuberculosis.

Radiographic findings may not lead to a diagnosis. CT and MRI are more helpful than plain radiographs in diagnosis as they clearly demonstrate the internal bone osteomyelitis changes with abscess.

### **CONCLUSION**

In conclusion, this case brings a very rare presentation of osseous tuberculosis i.e. tuberculous osteomyelitis of the scapula without any other prior pulmonary symptoms and signs. The diagnosis is often delayed due to lack of awareness, insidious nature, lack of early radiographic findings and lack of symptoms and signs.

### **REFERENCES**

1. Arriaza, BT, Salo, W, Aufderheide, AC, Holcomb, TA. Pre- Columbian tuberculosis in northern Chile: Molecular and skeletal evidence. *Am J Phys Anthropol* 1995; 98: 37.
2. Kam WL, leung YF, chung OM, wai YL. Tuberculous osteomyelitis of the scapula. *Int orthop* 2000;24:301-2.
3. Martini M Adjrad A, Boudjemaa A. Tuberculous osteomyelitis. A review of 125 cases. *Int orthop* 1986: 10; 201-7.

4. Vohra R, Kang HS, Dogra S, Sagar RR, Sharma R. Tuberculous osteomyelitis of bone joint surg Br 1997; 79:592-6.
5. Sahoo M, Sahai K, Nayak VM. Scapulohumeral tuberculosis diagnosed by fine needle aspiration cytology. Acta cytologica 1998; 42: 435-6.
6. Lee S, Abramson S. Infections of the musculoskeletal system by M. tuberculosis. In: Rom W, Garay S, editors. Tuberculosis. Boston: Little Brown, 1996:635-44
7. Tatelman M, Drouillard EJP. Tuberculosis of the ribs. Am Roentgenol Radium Ther Nucl Med 1953; 70: 923-35.