

# Caries Exudata – Do You Know?

Satyen Joshi<sup>1</sup>

## Abstract

**Introduction:** Tuberculosis is a commonly encountered disease in developing countries. India bears 1/4th of the burden of tuberculosis which commonly affects the pulmonary system. 1-3% of tuberculosis is skeletal, of which more than 50% affects the spine so shoulder tuberculosis is a rare presentation. Shoulder tuberculosis usually presents as caries sicca which is the dry form causing glenohumeral arthritis. In this report we discuss a case of tuberculosis of the shoulder with cold abscess which has been described as caries exudata; the wet form, which is a rare presentation.

## Introduction

Tuberculosis is a commonly encountered disease in third world countries till date. As per the WHO global report 2015, more than 1/4th of Tuberculosis burden is in India. Tuberculosis most commonly affects the pulmonary system. Skeletal tuberculosis is seen in 1-3 % of all tubercular cases and about 11 % of extrapulmonary tuberculosis [1]. More than half the skeletal tuberculosis affects the spine

## Clinical Presentation

A 59 year old male, farmer by occupation presented to the out patient department with complaints of pain in the left shoulder since 1 and half year. Patient had a swelling in the left shoulder region associated with restriction of movements of the shoulder joint. There were no constitutional symptoms or history of tuberculosis.

On examination, the patient had severe wasting of the supraspinatus, infraspinatus and deltoid muscles. There was a soft non tender swelling approximately 5 x 6 cm over the left shoulder region. No active movements were possible. Passive abduction of 30 degrees and forward flexion of 20 degrees was possible. There were no sinuses present.

On radiological examination, X-ray [Figure 1] revealed destruction of the head of the humerus with cystic changes in the greater tuberosity region. There was arthritis of the shoulder joint with destruction of both humeral head and glenoid. There were marrow changes in the proximal humerus. Chest X-ray revealed no abnormalities. MRI [Figure 2] of the shoulder joint revealed a hyperintense swelling in the lateral

part of the proximal shoulder with involvement of the humeral head. It was well capsulated. There was synovial hypertrophy with destruction of articular cartilage of humeral head and glenoid. There was edema in the muscle bellies of deltoid supraspinatus and infraspinatus. MRI report was suggestive of abscess secondary to suppurative arthritis.

Laboratory examination revealed a normal white blood cell count with an ESR of 80mm and a normal CRP.

## Management

A lateral incision [Figure 3] was taken. After superficial dissection a well formed abscess [Figure 4] of about 4 x 5 cms was found in the deltoid muscle communicating with the bone. En masse removal was done. Thorough debridement of the bone was done.

The Gram staining and ZN staining revealed no bacteria/fungus or Acid fast bacilli respectively. The bacterial culture showed no growth at 24 hours. Histopathological report [Figure 5] showed epithelioid cell granulomas, large area of caseous necrosis and langhans giant cells with dense lymphoplasmacytic infiltration This was suggestive of tubercular lesion.

Patient was referred to a chest physician and started on Anti – Tubercular Drugs as per latest government guidelines in India.

## Follow – Up

At 3 weeks post operatively, the surgical wound had healed with primary intention. Patient complained of no pain and was started on physiotherapy. Repeat ESR was 60 mm revealing a decreasing trend post starting anti tubercular drugs. CRP and white blood cell count were within normal limits.

## Discussion

Majority of skeletal tuberculosis is seen in the spine[2]. Approximately 0.9 – 1.7 % of the skeletal tuberculosis occurs in

<sup>1</sup>Department

Address for correspondence:

Dr. Satyen Joshi

Email ID: aditmaniar@gmail.com

the shoulder joint [3]. Tuberculosis of the shoulder joint usually presents with arthritis of the shoulder joint. Very rarely can it present as a synovitis of the shoulder joint [4]. Three forms of tuberculosis in the shoulder have been identified:

Type I – Caries sicca which is the dry or atrophic form. It usually presents with shoulder joint stiffness and arthritis.

Type II – Caries exudata which presents with cold abscesses or a sinus in the wet form.

Type III – Caries mobile with good range of passive movements.

Caries sicca is the most common presentation of shoulder joint tuberculosis. In a study it was found that only 2 out of the 12 cases of shoulder tuberculosis were of the caries exudate type [5].

Shoulder joint tubercular is a slowly progressive disease and often misdiagnosed as a degenerative condition or tendon

tears. It can lead to severe disability with gross restriction of movements

X-ray may show arthritic changes. MRI may be suggestive of arthritis, synovitis and abscess formation.

Effective anti tubercular treatment is necessary to control the spread of the disease. Most cases can be managed conservatively if diagnosed early. In majority of cases a fibrous ankylosis is acceptable [6]. Some may require a shoulder arthrodesis or total shoulder replacement.

### Conclusion

In the current era with increasing trend of extrapulmonary tuberculosis it is important to diagnose skeletal tuberculosis early to prevent permanent joint damage and loss of function.

## References

1. Malaviya AN, Kotwal PP. Arthritis associated with tuberculosis. *Best Pract Res Clin Rheumatol*. 2003 Apr;17(2):319-43.  
<https://www.ncbi.nlm.nih.gov/pubmed/12787528>
2. Garg RK, Somvanshi DS. Spinal tuberculosis: a review. *J Spinal Cord Med*. 2011;34(5):440-54.  
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3184481/>
3. Duthie RB, Ferguson AB. *Mercer's Orthopaedic Surgery*. 7th Edition. London; Edward Arnold [Publishers] Ltd. 1973:559-560.
4. PR Patel, DA Patel, T Thakker, K Shah, VB Shah. Tuberculosis of shoulder joint. *Indian J Orthop*. 2003;(2)37:7  
<http://www.ijoonline.com/article.asp?issn=00195413;year=2003;volume=37;issue=2;spage=7;epage=7;aulast=Patel>
5. SM Tuli. *Tuberculosis of the Skeletal System*. 5th edition.
6. Tang SC, Chow SP. Tuberculosis of the shoulder. Report of five cases treated conservatively. *J R Coll Surg Edinb*. 1983 May;28(3):188-90.  
<https://www.ncbi.nlm.nih.gov/pubmed/6875991>

Conflict of Interest: NIL  
Source of Support: NIL

### How to Cite this Article

Joshi S. Caries Exudata – Do You Know?. *Journal of Trauma and Orthopaedic Surgery*. Jan - March 2019;14(1):18-19.