

## Mid Clavicular swelling; An Unusual Presentation of Clavicle Tuberculosis: A Case Report.

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### ABSTRACT

Tuberculosis of clavicle is one of the rarely reported pathology of skeletal tuberculosis in the literature. It is difficult to diagnose because other conditions of clavicle also presents with same confusing picture, which can lead to delay in proper diagnosis and treatment. Our case is a young adolescent female presenting with complaints of mild pain and swelling in mid clavicular region for the last six month. She was diagnosed as case of mid clavicular tuberculosis and she was managed with anti-tubercular chemotherapy.

**Keywords:** Clavicle, Tuberculosis, Ewing sarcoma.

### INTRODUCTION

Tuberculosis remains enigma for developing and underdeveloped world. Continuous reporting of unusual presentation of osteoarticular tuberculosis further worsens the situation. Osteoarticular tuberculosis is 2-5 % of all case presented and only less than 1 percent cases are report in literature involving clavicle with unusual and atypical presentation.<sup>[1]</sup> Further mid clavicular lesion are very rare only few cases are reported in literature worldwide. Its rare entity and atypical presentation give confusing picture and often led to misdiagnosis and mismanagement which further adds on to complications.<sup>[2]</sup> Available diagnostic modalities like plain radiograph and MRI give picture same as other similar conditions like malignancy and infection may not bring any diagnosis toward tubercular nature. Here we are reporting a case of adolescent girl with swelling and pain over mid clavicular region primarily diagnosed as Ewing sarcoma on X ray and MRI, which was later, came out as tuberculosis on biopsy.

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### CASE REPORT

A 14 year female presented to orthopedics outpatient department with history of pain and swelling over right clavicular region since 6 months [Figure 1]. Pain was insidious in onset, continuous and mild in intensity. It used to subside with medications. It was associated with small swelling which patient ignored for last four months. There was no history of trauma. There was history of low grade fever off and on which used to subside on taking medication. From last one month pain and size of swelling increased suddenly with painful movement of shoulder which leads the patient to visit orthopedics outpatient department.



**Figure 1:** Clinical photograph showing right side mid clavicular swelling.

On examination, globular smooth swelling was present over right mid clavicular region, which was 4x3x2 cm in size. It was tender, soft to firm and not adhering to skin and fixed to underlying bone. Skin over swelling was normal.

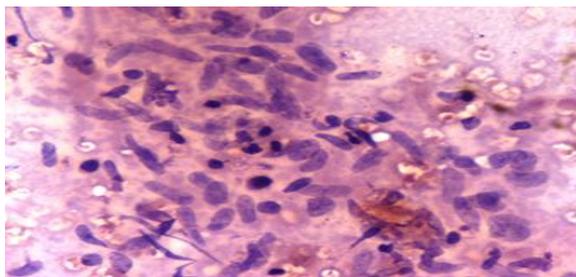
Plain radiograph of right clavicle anteroposterior view shows expansile mid clavicular lytic lesion with sclerosed margins [Figure 2].MRI shows mildly expansile intramedullary altered intensity in mid clavicle region with evidence of cortical breach extended to adjacent soft tissue with periosteal reaction. It also shows post contrast enhancement with central necrotic zones suggestive of Ewing sarcoma and was advised biopsy correlation.



**Figure 2:** X-ray of right clavicle showing expansile lytic lesion, with sclerosed margins.

Laboratory investigation shows erythrocyte sedimentation rate 24 mm/hr, Hemoglobin- 10.9, total leukocyte count 9000, neutrophil 70%, lymphocyte 18%, serum creatinine 0.6, and blood urea 21.

Fine needle aspiration cytology of Right clavicle was done suggesting granulomatous tuberculosis.



**Figure 3:** Fine needle aspiration cytology showing well defined epithelial cell granulomas containing few lymphocytes and central caseation necrosis. Background shows numerous polymorphs along with blood and eosinophils.

Patient was started with multidrug anti tubercular therapy regimen consisting of four drugs, rifampicin 450 mg, isoniazid 300 mg, ethambutol 800 mg, and pyrazinamide 1500 mg.

Patient was followed up after 6 weeks. There was relief in pain and swelling. There was improvement in range of motion of right shoulder.

## DISCUSSION

Tuberculosis of clavicle is a rare pathology.<sup>[2]</sup> Isolated clavicular tuberculosis is even less common than other osteoarticular tuberculosis.<sup>[3]</sup> Tuberculosis can involve any part of clavicle with

most common site medial 1/3<sup>rd</sup>. It can also involve sternoclavicular or acromioclavicular joint. It is associated with pain without major bone destruction, which later on may present with cold abscess, sinuses, non-healing ulcers<sup>[2]</sup> etc. Very rarely, it may present with unexplained chronic shoulder pain.

Radiologically the lesions in tuberculosis can be either destructive or proliferative (spina ventosa) and in very few cases pathological fractures are also seen.<sup>[2]</sup> Conventional radiograph gives very confusing picture which may show multiple cystic cavities or sequestrum, honeycombing or diffuse thickening. Diagnosis with plain radiograph is very difficult due to overlapping anatomical structure and hence it is not an effective tool for evaluating the changes.<sup>[2]</sup>

However, CT scan and MRI provide better images.<sup>[4]</sup> CT scan is better option for appreciating destructive changes particularly in bone window setting while MRI is more useful for appreciating the extent of lesion and determine soft tissue and bone marrow involvement.<sup>[5]</sup>

Diagnosis can be further confirmed by histopathological<sup>[6]</sup> and microbiological examination. Tissue from the bone can be obtained by FNAC, core biopsy or curettage.<sup>[2]</sup> It is suggested that during investigation, sample should be taken from as many site as possible such as lymph node, abscess, ulcer, bone etc.

Main modalities of treatment is anti-tubercular drug but in advance cases of tubercular osteomyelitis anti-tubercular drug should be combined with surgical measures such as debridement and curettage of lesion or resection of infected clavicle without loss of function. Surgical intervention is more useful when disease is unresponsive to medical treatment when diagnosis is uncertain or there is an impending abscess burst. Mainstay of treatment is modern medical therapy with multidrug antimicrobial drugs in which isoniazid, rifampicin, pyrazinamide and ethambutol are given for two months and rifampicin and isoniazid for next ten month.<sup>[7]</sup>

## CONCLUSION

Tuberculosis of clavicle is an important differential diagnosis of non-traumatic lesion of clavicle which includes infection and neoplasm.

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