

## Case Report

# Tuberculosis of sternoclavicular joint: a rare case report

**Atil Kumar Lal \***, Sudhir Shyam Kushwaha, Ajay Bharti, Mahima Pandey

Department of Orthopaedics, AIIMS Gorakhpur, Uttar Pradesh, India

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**\*Correspondence:**

Dr. Atil Kumar Lal,

E-mail: [atil27@gmail.com](mailto:atil27@gmail.com)

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### ABSTRACT

Osteoarticular tuberculosis comprises 10-15% of the all cases of extrapulmonary tuberculosis. Tubercular involvement of the sternoclavicular joint is very rare. We hereby present a rare case report of the 38 year old female with sternoclavicular joint tuberculosis with cold abscess. The diagnosis was confirmed by FNAC and on ZN staining AFB was isolated. Patient was managed successfully by the anti-tubercular therapy at the end of the treatment. So, a degree of suspicion of the tuberculosis at these rare sites along with investigation followed by anti-tubercular therapy leads to successful treatment of the disease.

**Keywords:** FNAC, Sternoclavicular joint tuberculosis, ZN staining

### INTRODUCTION

Tuberculosis is still a significant problem in the developing countries. 15% of the patients with tuberculosis have extra-pulmonary lesions out of which only 1-3% have bone and joint lesions. Tubercular involvement of the sternoclavicular joint is very rare. In two of the world's largest series of osteoarticular tuberculosis, sternoclavicular joint involvement was reported in <0.5% of cases. Only 20 cases have been reported in the literature.<sup>1</sup>

In the developing countries, Tubercular arthritis is mostly a disease of children and young adults while in developed countries the disease is predominantly seen in Elderly and immune-compromised hosts. Tubercular affection of a joint is usually the result of hematogenous dissemination from a distant focus of infection. Articular infection may remain latent for long periods before clinical presentations. Fever and other constitutional symptoms of tuberculosis are often absent.

Hereby, we report a rare case of Tubercular sternoclavicular joint abscess without any demonstrable active foci of pulmonary or extra pulmonary Tuberculosis.

### CASE REPORT

A 38 year old female patient presented to our outpatient department with history of pain and swelling over the sternoclavicular joint (Figure 1). The pain was insidious in onset and started about three months ago. The pain was dull aching in nature, present over the sternoclavicular joint and was relieved by medication. Shoulder movements were also painful. The pain was non-radiating and no diurnal variation was present. Since 20 days the patient developed swelling over the lower part of side of the neck. The skin overlying the swelling was slightly Erythematous and temperature was slightly raised. The swelling was tender. There was history of evening rise of temperature and weight loss. There was no history of trauma, discharging sinus and history of contact.

Laboratory investigation showed haemoglobin as 9g%, slight lymphocytosis, CRP was positive and ESR was raised (50mm in 1 hr). Chest radiograph showed destruction of the Sternal end of the (L) sternoclavicular joint (Fig 2). CT scan showed inflammatory changes in the Sternal end of the clavicle with pleural effusion. Fine needle aspiration of the lesion was done using a 22-gauge Needle and the aspirate was sent for ZN staining, Gram staining and culture of the aspirate. The ZN-stained smear showed the presence of acid-fast bacilli (AFB). The Giemsa stained smears showed necrotic material and degenerated inflammatory cells. So diagnosis of the tuberculosis was confirmed after six weeks of the culture the growth of Tubercular bacteria from the aspirate, further confirming the diagnosis.



**Figure 1: Swelling over the sternoclavicular joint.**



**Figure 2: Chest radiograph showed destruction of the sternal end of the (L) sternoclavicular joint.**

### **Treatment**

After confirming the diagnosis, Antituberculosis treatment was started with four drug regime (rifampicin, isoniazid, ethambutol and pyrazinamide) for three months followed by three drugs four months (rifampicin, isoniazid, ethambutol) and followed by two drug regime (rifampicin, isoniazid) for remaining period with total period of 18 months. The patient was followed every month to see the clinical and Radiological improvement.

The pain decreased significantly after six months of the treatment and the swelling completely subsided after three months of the treatment. After completion of the treatment patient had full range of motion over shoulder joint and was free from the disease.

### **DISCUSSION**

Despite of the significant development of the diagnostic, curative and preventive modalities in tuberculosis it still remains a significant problem in the developing countries like India. Osteoarticular tuberculosis accounts for about 10-15% of the all cases of the extrapulmonary forms of tuberculosis.<sup>2</sup> With the increase in the cases of immunodeficiency and resistant strains of the M. Tuberculosis there is resurgence in the cases of Osteoarticular Tuberculosis. Tuberculosis has been described to affect almost all parts of the body. However, it rarely involves the sternoclavicular joint.<sup>3</sup> The rarity of occurrence of Tuberculosis in the sternoclavicular joint can be attributed to the peculiar blood supply of this joint. Sy Mh et al & Tuli et al reported only seven cases of clavicle and sternoclavicular joint Tuberculosis out of 1074 cases of osteoarticular tuberculosis.<sup>4,5</sup>

Similarly, Martini reported only case of sternoclavicular joint Tuberculosis in the series of 642 cases of osteoarticular tuberculosis.<sup>6</sup> For a good outcome, early diagnosis is essential to prevent the complications such as migration of cold abscess in the mediastinum<sup>6</sup>. A high index of suspicion coupled with radiological investigation may give a clue to the diagnosis. A Poor response to ordinary antibiotic therapy also leads to suspicion. Conventional radiography is not confirmatory. CT may show osseous destruction and sclerosis. MRI tells the status of soft tissue involvement and extent of the disease. The final confirmation of sternoclavicular joint Tuberculosis is open biopsy or fine-needle aspiration.<sup>7</sup> In our case also presence of AFB on ZN stain confirmed the diagnosis of Tuberculosis.

### **CONCLUSION**

The diagnosis of sternoclavicular Tuberculosis should be considered as a differential diagnosis in patients presenting with arthritic pain over the sternoclavicular. Imaging methods can provide a clue to the diagnosis. The final diagnosis can be confirmed only by open biopsy and histopathology, Timely diagnosis and treatment with antituberculosis drugs usually gives good results and prevent possible complications, like compression or erosion of the large blood vessels the base of the neck and migration of the cold abscess to the mediastinum.

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