Case Report: Tuberculosis of Capitellum Humerus

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ABSTRACT
Tuberculosis is common in countries constituting endemic areas like Pakistan, spinal sites represents half of osteo-articular locations, while peripheral locations in the limbs are rare. The authors relate in this observation the case of a particular location of tuberculosis of capitellum humerus. It is radiolucent area in capitellum of humerus on x rays. Clinical signs were characterized by a moderately painful swelling over the lateral aspect of distal humerus with slow evolution. The definitive diagnosis was histologically obtained. Clinical cure was achieved after 09 months of medical treatment.

Keywords: Tuberculosis, osteoarthritis, capitellum of humerus, anti tuberculous chemotherapy.

INTRODUCTION
The elbow joint is the most frequently involved joint in tubercular infections of the upper limb. The reported incidence of elbow TB varies from 2 to 5% of all skeletal locations. There are few published major reports focusing on TB of the elbow joint, but there is no reported study on tuberculous lesion of capitellum humerus. Wilson (1953), managed cases with prolonged immobilization and classified the condition radiologically. Martini et al. classified the cases into four radiological types and the treatment was based on the severity of radiological involvement.

We report in this observation the case of a patient with tuberculous lesion of the capitellum of humerus, observed and treated in the Institute of Orthopedic and Surgery Karachi Pakistan, with an epidemiological, clinical and therapeutic reminder of this disease.

METHODS
Thirty years old male presented to Institute of Orthopedic and Surgery with painful swelling over lateral aspect of left elbow for 3 months.

On examination: swelling was warm, mild tender and ROM was painful and restricted (30-120 deg), distal neurovascular was intact. D/D: 1. Tumor, 2. TB elbow, 3. Synovitis (Rheumatoid??).

Surgery was planned; Lt elbow arthrotomy, curettage of the lesion+bone grafting and biopsy.

Per operative findings were osteolytic lesion with caseous necrosis in the capitelum of Lt humerus and inflamed synovium.

Postoperative neurology was intact, back slab left elbow at 90 degree given for 2 weeks.

After 2 weeks back slab and stiches removed, early ROM started and according to biopsy report antituberculous drugs started for 9 months.

DISCUSSION
Tuberculous infection in the elbow joint usually starts in the olecranon and lower end of humerus, and very rarely is the primary disease limited to the
synovium. The common diagnostic confusion in elbow TB is due to the similarity of disease with the more common pathologies like rheumatoid arthritis, low virulence pyogenic arthritis, gout, pigmented villonodular synovitis and even sometimes neoplasms.

Tuberculosis (TB) is still a major public health problem in both developing and industrialized countries like Pakistan and India. Although the incidence of TB has decreased since the introduction of antituberculous drugs, most developing countries have been facing a resurgence of the disease since 1985. The prevalence of TB is particularly high among patients with AIDS, and the disease is often the first manifestation of HIV infection. Incidence of tuberculosis (per 100,000 people) in Pakistan was last measured at 231 in 2010, according to the World Bank.

Mycobacterium tuberculosis is the main causative organism, and only a few cases are attributable to Mycobacterium bovis. TB of a joint may result from hematogenous dissemination through the subsynovial vessels, or indirectly from epiphyseal (more common in adults) or metaphyseal (more common in children) lesions that erode into the joint space.

TB infection in its various forms remains a major cause of high morbidity and mortality due to infectious diseases worldwide. Successful treatment in active TB is influenced by establishing an early diagnosis and initiation of an appropriate treatment. Along with the global increase in the incidence rates of TB, there are reports of an increased incidence of bone and joint TB in all the countries of the world. Osteoarticular TB is found in about 3% to 5% of patients with TB, where 50% of the cases involve the spine; hip and sacroiliac joint, 12% to 15%; knees, 10%; ribs, 10%; shoulder, 7%; ankle, 7%; elbow, 2%; and wrist, 2%.

TB of the bones and joints are the most common extrapulmonary form. Worldwide, of 20 000 cases of extrapulmonary TB, 19% were TB of the bones and joints.

The diagnosis of osteoarticular TB is often delayed, on an average by 16 to 19 months, and maybe up to 10 years, as a result of difficulty in identifying the organism and because the clinical symptoms are nonspecific and with insidious onset that can mimic common joint diseases like rheumatoid arthritis and osteoarthritis.

We believe that a high level of clinical suspicion is essential for early diagnosis and treatment of tuberculous arthritis to reduce the significant morbidity involved.

CONCLUSION

The nonspecific, often indolent, clinical presentation of osteoarticular TB, together with its low prevalence and the low index of suspicion among clinicians, may result in delay in its diagnosis. However, prompt diagnosis and treatment of this curable disease remains critical for proper management and preventing joint stiffness, deformity and permanent bone destruction.

REFERENCES

