Symmetrical Lytic Lesions in Ulna: unusual presentation of Multifocal Osteoarticular Tuberculosis

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Introduction

Tuberculosis is a major health problem in underdeveloped countries like Pakistan. In developed countries, resurgence is being seen due to acquired immunodeficiency syndrome. However, primary cystic tuberculous infection of the bone is rare. The radiological appearance of primary cystic tuberculous infection of the bone can mimic several bone conditions including bone cyst, giant cell tumour, osteoblastoma and even osteosarcoma.1 High degree of suspicion is required to diagnose such cases and biopsy is mandatory for definitive diagnosis. 2

Case Report

A 25 year old female presented with pain and restriction of movements in her both elbow joints for the last 4 months. According to her, pain at the elbow joints gradually increased over this period and now she was finding it difficult to carry out her routine work. She had swelling mainly over the olecranon process of both ulna which had gradually increased in size. She also had pain in her right mid foot. There was history of low grade fever, which usually occurred in the evening hours. There was no history of weight loss and there was no significant past medical history.

On clinical examination, there was swelling over both olecranon processes. Swellings were soft and fluctuant and overlying skin was normal.

Right elbow had fixed flexion contracture of 15 degree and range of movement from 15 to 135 degrees and left elbow had fixed flexion contracture of 10 degree and range of movement from 10 to 135 degrees with mimimal pain on movement of both elbows. There was mild tenderness on right mid foot with no other abnormality. Chest examination was unremarkable.

Complete blood count and ESR were normal. Radiology showed symmetrical lytic lesion in olecranon process of ulna on both sides. Isotope scan showed increased uptake in both elbows and right intermediate cuneiform bone.

Curretings of right olecranon taken under general anesthesia were reported as chronic granulomatous lesion, consistent ith tuberculosis.

Patient responded to nine months multidrug anti-tuberculous therapy and has regained full range of movement in both elbow joints.

Discussion

The prevalence of tuberculosis in Pakistan is around 200/1000003 and in northern areas 554/100000.4 Ten percent of tuberculous infections are extrapulmonary and 10% of this involve the musculoskeletal system. Out of this 10%, vertebral column is involved in 50% of cases. 5

Osteoarticular tuberculosis is of two types: extra-articular and intra-articular The most susceptible parts of the skeleton are the regions of growth such as epiphyses and metaphyses in children and young adults and bone containing haemopoetic bone marrow such as vertebral bodies.

Tuberculous lesions in bone are lytic with poorly defined margins that often cross the physes. Multiple sites may be involved. However, symmetrical lytic lesions in bones due to tuberculosis are rare and only very few cases have been reported. The indolent course and progressive symptoms are the most consistent features of musculoskeletal tuberculosis and misdiagnosis is common. The most common symptoms are pain, fever, chills, night sweats, anorexia, weight loss and local swelling. The ESR, although typically elevated can be normal and peripheral white count usually is normal.

Radiology may show lytic lesion in the bone. Osteopenia and joint effusion are common with articular involvement. As these lesions radiologically mimic bone cyst, osteoblastoma, osteosarcoma and metastatic bone disease, biopsy is mandatory to confirm the diagnosis. The advent of DNA amplification techniques such as the polymerase

chain reaction may herald a promising new era in the prompt and accurate management of extrapulmonary tuberculosis. 6

If osteoarticular tuberculosis is diagnosed and treated at an early stage, approximately 90-95% of patients achieve healing with near normal function. The mainstay of treatment is anti-tuberculous therapy and active assisted exercise of the involved joint throughout the period of healing. 7

Cystic type of tuberculosis is rare and presents a difficult to diagnose problem. The purpose of this case report is to highlight the features for the diagnosis of bilateral symmetrical cystic lesions of bone and to emphasize the importance of carrying out biopsy in such cases for the confirmation of diagnosis.

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