CASE REPORT

REACTIVE POLYARTHRITIS IN TUBERCULOSIS: A CASE OF TUBERCULOUS RHEUMATISM (PONCET'S DISEASE)

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ABSTRACT: SUMMARY: Atypical presentations of tuberculosis are known. We present here a case of reactive polyarthrititis due to tuberculosis. Patient was treated with four drugs anti Tuberculous regime which led to complete resolutions of symptoms.

INTRODUCTION: Tuberculosis (TB) is a major public health problem. It ranks second leading cause of death from infectious diseases. In year 2012 estimated global annual incidence of TB was 8.6 million cases, out of which 2.3 million were occurred in India and 1.3 million death occurred globally.^{1,2}

Atypical presentation of TB can be contributing factor for delayed diagnosis, morbidity and mortality.³ We reporting here case of inflammatory polyarthrititis turned out to be reactive polyarthrititis due to tuberculosis. So high index of suspicion and early treatment led to successful outcome.

CASE SUMMARY: A 36years old female presented to an outpatient clinic with complains of low grade fever, loss of appetite and painful swelling of both ankles, wrist, elbow, shoulder joints, and small joints of the fingers. There were no respiratory symptoms, no symptoms of urinary tract infection or sexually transmitted infections. There was no history of malar rash, oral ulcers, and rash. There was no significant lymphadenopathy or erythema nodosum. Clinical examination revealed low body weight 45kgs, mild pallor, Pulse rate 92/min, Blood pressure 100/70 mmHg, Body Temperature 39.1° C. Her cardiac and respiratory examination was within normal limits. Her haemoglobin was 10.8 gm% and microcytic hypochromic picture in peripheral smear.

Total leukocyte count of 8200/cumm. DLC showing 55 % neutrophils, 41 % lymphocytes, 2% eosinophil, 2% monocytes. ESR was 40mm/Hr. Serum Uric acid 4.6 mg% and negative for HIV 1 and 2 antibodies. Urine routine examination was normal. Chest X-ray revealed normal. Rheumatoid Factor, ASO titre, antinuclear antibody, anti CCP antibodies were negative. X-ray of involved joints showed soft tissue swelling. Mantoux test was positive (12x12mms). MRI of left ankle joint (severely involved) showed inflammatory arthritis.

The patient was started on INH 300mg, Rifampicin 450 mg, pyrazinamide 1.5gm, Ethambutal 800 mg daily. After 3 weeks of treatment joint pain and swelling reduced significantly and after 6 weeks of treatment patient completely became free of joint pain.

DISCUSSION: Poncet⁴ described the clinical features of tuberculous rheumatism in 1987. Poncet's disease is used to indicate as an aseptic polyarthrititis, presumably reactive arthritis, developing in the presence of TB elsewhere.⁵

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It has been postulated that Poncet's disease and erythema nodosum could be different immunological expressions of the body to different fractions of tubercle bacillus. Another possibility is thought to be an arthritogenetic factor precipitating the condition. Autoimmunity has also been suggested as a cause.⁶

It is well known that tuberculous septic arthritis in which *M. tuberculosis* can be isolated from the joint. But active TB may be complicated by a sterile Reactive arthritis (ReA) which is less known and therefore often missed. Patients often respond quickly to the treatment of tuberculous reactive arthritis in Poncet's disease compared with tuberculous septic arthritis.^{7,8}

Even in countries with high TB prevalence, diagnosis remains challenging due to atypical presentation of Poncet's disease. Poncet's disease showed wide atypical presentation such as only 6% patients had erythema nodosum, suggest decreased prevalence of erythema nodosum with active primary TB. 30% of patients showed some features of oligoarthritis and the rest, polyarthritis.⁹

In this patient, synovial fluid examination was not done since there was no clinical indication of joint effusion or joint destruction. The diagnosis of Poncet's disease were made based on clinical suspicion, especially when synovial fluid examination was not possible.⁹In the study of review of 50 cases Kumar et al diagnosed 2 cases on clinical basis only.¹⁰

The present case, search for other causes of polyarthritis did not succeed, tuberculin test was positive and also MRI showed inflammatory arthritis. So we suspected Poncet's disease. Subsequent improvement of arthritis on starting anti tuberculous drugs conformed the diagnosis of tuberculous rheumatism.

CONCLUSION: Diagnosis of TB in some patients delayed because of atypical presentation. Even though it is not possible to come to conclusive diagnosis of Poncet's disease, immunological reactions such as reactive arthritis even without respiratory symptoms should alert physician to search for TB. Thus performing relevant examination and investigations may help to diagnose and treat appropriately before developing the complications.

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Fig. 1: MRI of Left Ankle

Fig. 2: MRI of Left Ankle

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Fig. 3: X-ray left Ankle AP

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