

Case Report

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Polyarthritis and erythema nodosum: an unusual presentation of tuberculosis

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ABSTRACT

Reactive arthritis and erythema nodosum occur in presence of active tubercular infection and both are immunological phenomenon. Author described a case report of a 17year old female with 10months history of symmetrical polyarthritis and presence of healed lesions of erythema nodosum. She was also found to have caseating granulomatous lesion in right supraclavicular lymph node which led us to diagnosis of tuberculous lymphadenitis presenting as reactive polyarthritis (ponce's disease) and erythema nodosum. Her joint pain and swelling dramatically resolved after 2weeks of ATT. Thus, tuberculosis may manifest as reactive polyarthritis (ponce's disease) and erythema nodosum and they should be kept in mind even in the absence of other clinical clues of TB, to provide patients with a good clinical outcome.

Keywords: Erythema nodosum, Polyarthritis, Tuberculous lymphadenitis

INTRODUCTION

Tuberculous rheumatism is a form of reactive arthritis characterized by non-erosive symmetric polyarthritis that occurs in the presence of an active TB infection where no other known cause of polyarthritis can be detected. It is a diagnosis of exclusion and a different entity from TB arthritis which is usually mono-articular.

Erythema nodosum is characterized by inflammation of fat cells (panniculitis) resulting in tender erythematous nodules usually seen on both legs and resolves spontaneously. Usually, it is idiopathic in about 55% cases.¹ The most common cause of erythema nodosum in India is tuberculosis.² It may often be the first sign of a systemic disease such as tuberculosis, sarcoidosis, inflammatory bowel diseases, lymphoma and other malignancies. Here author presented a case report of tubercular lymphadenitis presenting with polyarthritis and erythema nodosum.

CASE REPORT

A 17-year-old girl presented with pain and swelling of multiple large joints for 10months. Initially there was involvement of both knees which progressed to involve the ankles, wrist, and shoulders bilaterally leading to moderate restriction of joint movement. It was also associated with severe backache. She also complained of multiple painful erythematous nodules over both legs 4months back which was initially red turning into purple and then black. She also had low grade fever with evening rise of temperature for 2months which was associated with dry cough and weight loss of 8kgs in the last 2months. The temperature was well recorded by the patient. There was no history of morning stiffness, photophobia, malar rash, oral ulcers, dysuria, rashes or loose motions. She is not a known case of any chronic illness. Her mother suffered from Pulmonary TB 3years back. She is a student, consumes a rice based staple diet and a normal bowel, bladder and menstrual cycle. There

was no history of any addiction or allergies. In the last 10months, she presented to multiple physicians and was being treated with the suspicion of undifferentiated polyarthritis with analgesics. On examination, the patient was a thin built young female with a BMI of $17\text{kg}/\text{m}^2$, her vitals were stable. A $1.7*1.5\text{cm}$ tender, mobile lymph node was palpable in the right supraclavicular region. Multiple hyperpigmented healed patches of erythema nodosum were present over bilateral legs (Figure 1).



Figure 1: Healed erythema nodosum and ankle swelling.

Schober's test was negative. The ankles, knees, shoulder and wrist joints were tender, swollen and had limited range of movement. Rest of the systemic examination was within normal limits. Investigations revealed total leucocyte count of $5100/\text{mm}^3$, Hemoglobin of $7.49\text{g}/\text{dL}$, ESR of 62mm in 1st hour. Chest X-ray was normal. ANA profile, HLA-B27 and Anti-CCP Antibody was negative. Mantoux test showed induration of 25mm . FNAC of lymph node revealed caseating granulomatous lymphadenitis. Thus, the patient was diagnosed to have tuberculous lymphadenitis presenting as tuberculous rheumatism (poncet's disease) and erythema nodosum. Anti-tubercular treatment was started. The patient responded well with the drugs. The fever, joint pains and swelling subsided after 2weeks of treatment.

DISCUSSION

Tuberculous rheumatism (poncet's disease) is a form of reactive arthritis.³ It is an aseptic polyarthritis unlike tubercular arthritis which is mono-articular. Genetic theory suggests HLA linked hyper-reactivity to mycobacterial antigens.⁴ Immunological theory suggests

a hypersensitive immune response to tuberculo-protein.⁵ Antigenic cross-reactive immune response between human cartilage and fraction of mycobacterium tuberculosis has also been implicated in the pathogenesis.⁶

Erythema Nodosum is a panniculitis associated with numerous diseases such as infections, inflammatory diseases, tuberculosis or idiopathic. It has been seen in patients of active tubercular infections as a reactive immunological phenomenon.

In this case, the patient had a 10months history of polyarthritis and author ruled out all the autoimmune conditions causing it. The patient also had erythema nodosum which is seen in patients of tuberculosis. The patient also had raised ESR and Mantoux of 25mm which is significant. FNAC of the lymph node suggestive of caseating granuloma was diagnostic of tuberculosis and finally, she responded well to anti-tubercular therapy. Thus, active tubercular infections whether pulmonary or extra-pulmonary might manifest as immunological phenomena such as reactive arthritis (poncet's disease) and/or erythema nodosum.

CONCLUSION

This case report highlights tuberculous rheumatism which is usually missed in this clinical setting owing to lack of investigational evidence, clinical suspicion and mimicry of clinical presentation seen in connective tissue disorders which deprives patients of proper treatment. This case also had healed lesions of erythema nodosum which ultimately turned out to be tubercular lymphadenitis. Thus, tuberculosis may manifest as reactive polyarthritis (poncet's disease) and erythema nodosum and they should be kept in mind even in the absence of other clinical clues of TB, to provide patients with a good clinical outcome.

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