

Poncet's disease: Uncommon musculoskeletal manifestation of tuberculosis

Sir,

We found the article by Gupta and Bhatnagar, 'Musculoskeletal manifestations of tuberculosis: An observation study,' interesting.^[1] However, Poncet's disease, a form of reactive arthritis seen in patients of tuberculosis, was not mentioned in detail. We would like to discuss this entity as a case we encountered in our institute recently. A 27-year-old female presented with complaints of intermittent fever associated with chills of 3 weeks duration, which was associated with pain and swelling of bilateral ankles, wrists and knee joints. Patient also had bilateral erythema nodosum on shins. On clinical examination, liver, spleen and peripheral lymph nodes were non-palpable. Laboratory investigations showed erythrocyte sedimentation rate (ESR) 66 (reference range; 2–20), C-reactive protein (CRP) 39 IU/ml (reference range; 0–5 IU/ml) and rheumatoid factor (RF) 2.08 (reference range 0–14 IU/ml). Tuberculin sensitivity test was 20 mm after 72 h. Chest radiograph showed mediastinal widening suggestive of lymphadenopathy. A computed tomography of chest showed multiple necrotic mediastinal lymph nodes [Figure 1]. Radiography of bilateral elbow joints was normal. She was started on category I antitubercular treatment (isoniazid 5 mg/kg, rifampicin 10 mg/kg, pyrazinamide 25 mg/kg and ethambutol 15 mg/kg) according to the World Health Organisation (WHO) tuberculosis guidelines. Within 8 weeks of intensive phase of antitubercular treatment, she had resolution of fever and joint pain.

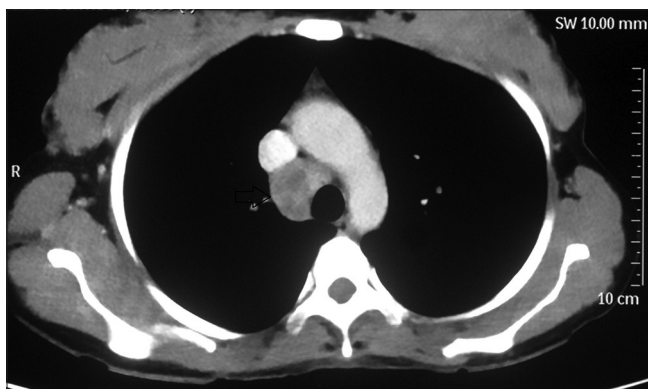


Figure 1: Computed tomography of chest showing necrotic lymphadenopathy

Discussion

Tuberculosis can have various musculoskeletal manifestations like direct involvement in the form of spondylitis, septic arthritis or immunological phenomenon like erythema nodosum, reactive arthritis and uveitis.^[1] Poncet's disease is an uncommon disorder, first described by Poncet in 1897.^[2] Despite the high incidence of tuberculosis in South Asia, the occurrence of Poncet's disease is not so common, only a few case reports on this entity are available.^[3] It is considered a reactive arthritis, but differs from typical form of reactive arthritis because of its prolonged history of fever before symptoms and early resolution with antitubercular therapy.^[4] The duration of joint symptoms may vary from few days to up to 6 years.^[3] Most probable mechanism responsible is molecular mimicry between tubercular antigen and joint cartilage, resulting in an inflammatory reaction in the joint spaces.^[3]

It is a symmetrical non-destructive oligoarthritis of large joints, ankles being most common followed by knees and wrist joints. Sacroiliac joints are usually spared.^[3,5] Focus of tuberculosis in majority of cases is extra pulmonary, tubercular lymphadenitis being most common.^[3] Complete resolution of rheumatic symptoms within weeks and months of anti-tuberculosis confirm the diagnosis.

Erythema nodosum was present only in 8.5% of cases in a study by Rueda *et al.*^[5] Diagnostic criteria were proposed by Sharma *et al.* for Poncet's disease [Table 1].^[3] They have suggested that initially cases should be classified as probable or possible and only after response to antitubercular treatment that they should be upgraded to definite case of Poncet's disease. As only small number of patients develops Poncet's disease despite high prevalence of tuberculosis, genetic susceptibility might play some role. Reactive arthritis has a strong association with human leukocyte antigen HLA-B27. A significantly increased frequency of HLA-B27 and

Table 1: Diagnostic criteria for Poncet's disease proposed by Sharma *et al.*^[3]

Essential criteria	Inflammatory, non-erosive, non-deforming arthritis Exclusion of other causes of inflammatory arthritis
Major criteria	Concurrent diagnosis of extra-articular tuberculosis Complete response to antitubercular therapy
Minor criteria	1. Mantoux positivity 2. Associated hypersensitivity phenomenon, such as erythema nodosum, tuberculids or phlyctenular keratoconjunctivitis 3. Absence of sacroiliac and axial involvement
For diagnosis:	
	Definite-Essential + two major
	Probable-Essential + one major + three minor
	Possible-Essential + one major + two minor, or essential + three minor

DQB1*0301 alleles were found in patients of Poncet's disease in a study by Lugo-Zamudio *et al.*^[6]

Conclusion

Poncet's disease should be considered in differential diagnosis of patients with prolonged fever and symmetrical large joint oligoarthritis in high tuberculosis prevalence areas and with focus of tuberculosis in body, other than joint space. It has good prognosis with resolution of symptoms with antitubercular treatment over weeks to months and no residual joint arthritis.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

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References

1. Gupta N, Bhatnagar AK. Musculoskeletal manifestations of

tuberculosis: An observational study. *J Family Med Prim Care* 2018;7:538-41.

2. Poncet A. De la polyarthrite tuberculeuse deformante ou pseudorheumatisme chronique tuberculeux. *Congres Francaise de Chirurgie* 1887;1:732-39.
3. Sharma A, Pinto B, Dogra S, Sharma K, Goyal P, Sagar V, *et al.* A case series and review of Poncet's disease, and the utility of current diagnostic criteria. *Int J Rheum Dis* 2016;19:1010-17.
4. Flores D, Marquez J, Garza M, Espinoza LR. Reactive arthritis: Newer developments. *Rheum Dis Clin North Am* 2003;29:37-59.
5. Rueda Juan C, Creepy MF, Mantilla RD. Clinical features of Poncet's disease from the description of 198 cases found in the literature. *Clin Rheumatol* 2013;32:929-35.
6. Lugo-Zamudio GE, Yamamoto-Furusho JK, Delgado-Ochoa D, Nunez-Farfan RM, Vargas-Alarcon G, Barbosa-Cobos RE, *et al.* Human leukocyte antigen typing in tuberculous rheumatism: Poncet's disease. *Int J Tuberc Lung Dis* 2010;14:916-20.

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Access this article online	
Quick Response Code: 	Website: www.jfmpc.com
	DOI: 10.4103/jfmpc.jfmpc_288_18

How to cite this article: Singh H, Pannu AK, Suri V, Bhalla A, Kumari S. Poncet's disease: Uncommon musculoskeletal manifestation of tuberculosis. *J Family Med Prim Care* 2018;7:1589-90.