Tenosynovitis: An Unusual Presentation of Leprosy

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Abstract

Tenosynovitis is an uncommon presentation of Type 1 reaction in leprosy. Herein, we report a case of bilateral tenosynovitis of wrist joints who after being unsuccessfully treated by a rheumatologist for several months, was finally diagnosed as a case of Hansen’s disease (borderline lepromatous) with Type 1 reaction.

Keywords: Leprosy, tenosynovitis, Type 1 reaction

Introduction

Leprosy can mimic many medical, rheumatological, and neurological disorders. This versatility may cause diagnostic dilemma and delay in the treatment. In leprosy, rheumatological involvement varies from 1% to 70%.[1] Tenosynovitis as a presenting feature of leprosy is rare.[2,3]

Case Report

A 50-year-old male, resident of Uttar Pradesh, gradually developed numbness over both hands in a period of 1 month. He consulted a neurologist who started him on some oral medications after some blood investigations, X-rays, and magnetic resonance imaging of spine. Two to three weeks later, he developed two small painless swellings on dorsal aspect of both wrist joints which gradually increased in size over next 2 weeks and were not associated with any other constitutional symptoms. The neurologist then referred him to a rheumatologist, who sent several investigations including aspiration cytology. He was treated with oral medications, with which the swellings used to regress, only to recur. After several months, he was referred to our center. At presentation, no documents of previous investigations or management were available with the patient.

On examination, he was found to have oval, soft, nontender, nonmobile swellings, approximately 5 cm × 4 cm in size, on the dorsal aspect of both wrist joints. The overlying skin was normal and local temperature was not raised [Figures 1 and 2]. Further examination revealed few ill to well defined, hypopigmented, normoesthetic to hypoesthetic macules on the back and ill-defined areas of hypoesthesia over ulnar aspect of both hands. Bilateral ulnar and left common peroneal nerves were uniformly thickened and nontender. No muscle weakness was noted.

Slit skin smear for acid-fast bacilli (L) was positive (1+), and skin biopsy from lesion on back was suggestive of borderline lepromatous leprosy. X-ray of both wrist joints showed soft-tissue swelling and did not reveal any bony abnormality. The aspirate from wrist swellings showed lymphocytes. Synovial biopsy revealed granulomatous synovitis [Figures 3 and 4]. Nerve conduction studies from right ulnar nerve showed demyelinating neuropathy. Based on clinical examination and investigations, the diagnosis of Hansen’s disease (borderline lepromatous) with Type 1 reaction and bilateral tenosynovitis of extensor tendon of wrist joint was made. The patient was started on multibacillary-multidrug therapy (MB-MDT) and oral prednisolone. The swellings regressed in approximately 3 weeks. However, they recurred whenever oral prednisolone was tapered to 20 mg and this happened recurrently. Hence, thalidomide was added. However, he did not show response to thalidomide. Oral steroids were again started which has led to the resolution of tenosynovitis [Figure 5]. At present, they are being gradually tapered.

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A plethora of rheumatological manifestations is associated with leprosy, particularly with lepra reactions. A diligent examination for skin lesions/nerve involvement may uncover the diagnosis of leprosy in a patient referred for a rheumatologic disorder. Tenosynovitis is occasionally seen in Type 1 lepra reaction. These swellings are common over dorsa of hands and feet. The pathogenesis of tenosynovitis is postulated to be hematogenous spread of lepra bacilli and bacillary antigens getting trapped in synovial lining of tendon sheath giving rise to inflammatory cascade. On exploration, these swellings appear to arise from the synovial covering of the extensor tendons of wrist and fingers and have no communication with the joint. Histology of the synovium suggests these swellings to be of inflammatory nature.

A few reported cases of leprosy who had tenosynovitis also had other features of lepra reactions such as neuritis and constitutional symptoms; however, our case had no other features of lepra reaction. Agarwal et al. reported a case with swelling on dorsa of both wrists and tip of olecranon process with paresthesia in limbs. He was confirmed as a case of tuberculoid leprosy by nerve biopsy, with tenosynovitis. Our patient primarily complained of the swellings over his wrists and hypoesthesia was detected on examination. A case of borderline leprosy who presented with features of both Type 1 and Type 2 lepra reactions such as sudden appearance of erythema nodosum leprosum, severe constitutional symptoms, joint pain, and tenosynovitis was reported by Kar et al.

A clinical study conducted in the Department of Clinical Immunology, SGPGI of Medical Sciences, Lucknow, reported that twenty patients of leprosy had presented with rheumatic complaints primarily. Only one patient had tenosynovitis alone as a presenting feature while four patients had inflammatory arthritis with tenosynovitis. In our leprosy center, of the 781 patients of leprosy treated from 2002 to 2012, this is the first case of leprosy who presented as a case of tenosynovitis alone.

The mainstay of treatment of tenosynovitis of leprosy is oral corticosteroids. Haroon et al. reported a case of leprosy with
tenosynovitis where they began the treatment with MB-MDT and oral corticosteroids; however, because of unsatisfactory response, they added thalidomide to the treatment leading to resolution of tenosynovitis. Our patient responded to prolonged corticosteroid therapy. Our case highlights a unique presentation of leprosy as tenosynovitis alone mimicking rheumatological disorder causing a diagnostic dilemma. The presence of hypopigmented macules and hypoesthesia which was ignored by the previous physician led us to the diagnosis of leprosy.

**Conclusion**

Tenosynovitis is a rare feature of Type 1 lepra reaction and even rarer as a presenting feature of leprosy. Patients presenting with rheumatological symptoms, not explained by any other cause and not responding to conventional therapy, should thus be evaluated for leprosy.

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**Conflicts of interest**

There are no conflicts of interest.

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