Tenosynovitis is an unusual manifestation of leprosy even though musculoskeletal manifestations are seen in a large proportion of cases. We report a case that presented to us with tenosynovitis.

Case report:
A 42 years male presented with the complaints of swelling on dorsum of wrists and olecranon tips bilaterally along with tingling and numbness involving medial side of forearm and hands and lateral aspect of both feet for 5 months. There was no history of fever, arthritis, skin rash, dyspnea, chest pain, diabetes mellitus or leprosy. He had earlier received prednisolone, methotrexate and chloroquine in various combinations for a suspected diagnosis of rheumatoid arthritis. His examination revealed soft, cystic, non-tender swelling of 2 x 3 cm attached to extensor tendons with ill defined borders over dorsum of the wrists. He also had non-tender, firm, smooth, subcutaneous nodules over the tip of olecranon processes bilaterally. There was no evidence of arthritis. There was 2-cm hepatomegaly. He did not have any bony tenderness. Neurological examination revealed loss of temperature, pain and touch (fine and coarse) in ulnar distribution bilaterally and over lateral aspect of both feet. Both ulnar and common peroneal nerves were thickened and non-tender. He did not have any skin lesion at initial presentation, however 2 weeks later he developed a 1.5 X 1.5cm hypoaesthetic plaque over the forehead and medial aspect of right ankle.

Investigations revealed: hemoglobin 11.8 gm/dl, lymphocytes 11%, eosinophils 2% and monocytes 3%, ESR 10 mm fall, platelet count of 1,72,000/mm³, microcytosis and hypochromia on peripheral blood smear, total serum proteins 8.5 gm/dl, albumin 3.8 gm/dl, serum calcium 8.9 mg/dl, serum inorganic phosphorus 2.9 mg/dl. Renal, liver function tests and blood sugar were within normal limits. Serum electrophoresis showed a polyclonal pattern and skeletal survey did not reveal any lytic lesions. Abdominal fat pad aspirate for amyloid was negative. Nerve conduction velocity revealed demyelinating neuropathy involving bilateral common peroneal, sural and ulnar nerves. ELISA for HIV-1 and 2 was negative. Split skin smear was negative for acid-fast bacilli. Sural nerve biopsy confirmed the diagnosis of borderline tuberculoid leprosy.

Discussion:
The absence of joint pain, swelling and early morning stiffness helped us in differentiating tenosynovitis from arthritis, for which he was inadvertently being treated in past. The differentiation from ganglion was made on the grounds of short history, ill-defined borders and immobility of the swellings. The differential diagnosis of tenosynovial swelling with peripheral neuropathy includes leprosy and primary amyloidosis. Our patient had extensor tendon tenosynovitis, olecranon bursitis, hepatomegaly and peripheral neuropathy without any cutaneous lesion initially, and thus mimicked primary amyloidosis. Tenosynovitis as a presenting manifestation of primary amyloidosis has bee reported. Neural involvement is more common in the form of entrapment neuropathies. Development of cutaneous lesions later and investigations, however ruled out amyloidosis in our case.

These swellings are more commonly seen in lepromatous leprosy and 5-10% of patients with borderline tuberculoid (BT) in reaction and usually accompany the other manifestations of leprosy. However, tenosynovitis alone as a presenting manifestation of leprosy, as seen in our case, is rare. The other common sites of tenosynovitis in leprosy are the dorsum of feet and ankles as were seen in our case.

Whether the tenosynovitis was because of infiltration with lepra bacilli or immune mediated in our case would have been resolved by a synovial biopsy; however, patient refused the procedure. In an earlier study by Malaviya et al tenosynovial swellings at the dorsum of the wrists were reported to be inflammatory. The earlier belief that tenosynovial swellings in leprosy are usually benign and do not cause functional impairment is no longer valid. The pathogenic mechanism postulated is hematogenous spread of the lepra bacilli and bacillary antigens getting trapped in the synovial lining of the tendon sheaths and initiating the inflammatory cascade.

Thus our case highlights a unique presentation of leprosy, which mimicked rheumatoid arthritis. However, the presence of peripheral neuropathy, thickened nerves and cutaneous lesions suggested the diagnosis of leprosy.
Tenosynovitis as the presenting manifestation of leprosy

Reference: