Abstract: Peripheral nerve thickening is an important sign which is helpful in diagnosis of few diseases. In Asian countries especially where the prevalence of Hansen’s disease is high, a high index of suspicion is needed for diagnosis of other causes of peripheral nerve thickening as one could be mislead with the diagnosis of Hansen’s disease and intervention at the right time could prevent the neurological sequelae of the disease causing the peripheral nerve thickening. We report a case of neurofibroma with gross enlargement of common peroneal nerve who was misdiagnosed to have Hansen’s disease which lead to neurological sequelae.

Keyword: Peripheral nerve, Hansen, Neurofibroma, Common peroneal nerve

INTRODUCTION: Peripheral nerve thickening with sensory or motor neuropathy is associated with leprosy, neurofibromatosis, motor and sensory neuropathy, Refsum disease, nerve tumors, localized hypertrophic neuropathy and amyloidosis. In the tropics, leprosy constitutes a major percentage of cases with peripheral nerve thickening. 20% to as many as 96% of the patients with Hansen’s disease will have one or more enlarged nerves. In over 90% of those patients with nerve enlargement, it is detectable in either the ulnar or the peroneal nerve. Pure neuritic form constitutes 4 to 10% of patients with leprosy. In pure neuritic form, the ulnar and the common peroneal nerves are the most frequently affected nerves. Here we report a case of neurofibroma with gross enlargement of common peroneal nerve simulating leprosy.

CASE REPORT: A 29 year old female came with h/o weakness of the left foot and repeated falls for 6 years and was diagnosed to have pure neuritic type of Hansen’s disease as there are no skin lesions suggestive of Hansen’s disease and her skin smears were negative. She had taken anti-leprosy medication for 6 months with no improvement. At the time of presentation she had no hypopigmented anaesthetic skin lesions. Her left common peroneal nerve was grossly...
thickened and non tender. Neurological examination revealed “0” power of the muscles supplied by the common peroneal nerve and decreased sensation over the common peroneal nerve distribution area. USG of the nerve revealed a segmental thickening of the left common peroneal nerve for a length of approximately 2 to 3 cms in the popliteal fossa with increased vascularity in the thickened segment and a normal tibial nerve suggestive of a Neurofibroma/Inflammatory cause of nerve thickening. Nerve conduction study showed severe axonal neuropathy of left common peroneal nerve with sensory involvement. Left common peroneal nerve neurolysis and tibialis posterior tendon transfer (Barr's procedure) was done under spinal anaesthesia and tourniquet control. Nerve tissue was sent for biopsy and H&E staining revealed an ill circumscribed neoplasm composed of wavy bundles of spindle cells with interspersed collagen. Meisner bodies are seen with no atypia or mitoses consistent with neurofibroma. Active dorsiflexion was regained gradually with an active rehabilitation programme.

DISCUSSION:
Peripheral nerve thickening can occur in a variety of conditions. Neurofibroma is one such cause which when treated with early surgical resection can lead to complete recovery of the nerve. It may arise anywhere along a nerve from the dorsal root ganglion to the terminal nerve branches. It has a predilection to the motor portion of the nerve. Ulnar and common peroneal nerve are the common peripheral nerves involved. Neurofibroma usually produces a slowly growing, well-circumscribed lesion in the peripheral nerve. Localized intraneural neurofibroma which is the second most common type of localized neurofibroma manifests as a fusiform, segmental, internal enlargement of the peripheral nerve. It is comprised of a heterogeneous mixture of Schwann cells, fibroblasts, mast cells, and perineural cells [5]. The morphology, growth rate, and location of occurrence vary considerably among neurofibromas, which makes classification difficult.

It always presents as a painless mass, but less commonly with a neurologic deficit. Tinel's sign may be positive during physical examination, and the lesion is often transversely rather than longitudinally mobile.

The primary treatment of neuropathy caused by neurofibromas is surgical excision. The goals of surgical exploration are excisional biopsy and neurolysis. Early diagnosis and treatment will prevent the neurological sequelae of the neurofibroma. Conclusion: We conclude that neuritic Hansen’s can mimic neurofibroma. Neurofibroma must be remembered.
for in cases of nerve thickening and a nerve biopsy with surgical excision can prevent neurological sequelae.

REFERENCES:
1 Michael Donaghy, Enlarged peripheral nerves, Department of Clinical Neurology, University of Oxford, Radcliffe Infirmary, Oxford OX2 6HE, UK Practical Neurology, 2003, 3, 40–45


