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Case Report

Enlarged Facial Nerve, Transverse Cervical Nerve and Great Auricular Nerve in Leprosy: a Rare Combination

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Leprosy is the leading cause of all non-traumatic peripheral neuropathies worldwide. Ulnar nerve and lateral popliteal nerves have been found to be commonly affected. We are reporting a case of borderline leprosy with rare combination of right facial nerve palsy, enlarged right great auricular and transverse cervical nerves.

Key words : borderline leprosy, facial nerve, great auricular, transverse cervical

Introduction

Lepra bacilli are known to have affinity both for skin and peripheral nerves. This varies from person to person as well as ethnic groups, with more involvement of skin in some and greater involvement of nerves in others. Involvement of nerves manifest clinically as nerve thickening, sensory loss, autonomic dysfunction in the form of loss of hair and sweating along with various grades of motor disabilities. We report a case of borderline leprosy who presented with right facial nerve palsy, enlarged right great auricular and transverse cervical nerves. The simultaneous involvement of above nerves in leprosy has not been reported so far in literature.

Case Report

A 35 year old male presented with asymmetrical face while smiling and hypo pigmented patch over right cheek and neck since 10 months (Fig. 1a). The patient couldn't remember history of any redness, swelling and pain over the patch in past 10 months. His other medical history and personal history were unremarkable. There was no history of contact of leprosy in family. Dermatological examination revealed a hypo pigmented patch of size 6 cm x 5 cm with regular to irregular margin and satellite lesions over right cheek and neck. There was 80 to 90% loss of sensation in the patch covering the neck area. Motor examination revealed there was right side facial palsy with deviation of angle of mouth, weakness of right buccinator muscle while blowing, weakness of *levator palpebrae superioris* muscle (Fig. 1b). The right facial nerve,

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Fig. 1 : (a) Hypopigmented patch over face and neck with enlarged transverse cervical and great auricular nerves, (b) Facial palsy-asymmetrical face while smiling, (c) Enlarged facial nerve

great auricular nerve and transverse cervical nerve were enlarged and non-tender (Fig. 1a and c). Other peripheral nerves were not involved clinically. There was no evidence of reaction over the patch. The clinical diagnosis was borderline leprosy with right facial palsy. Histopathology from the patch over face was consistent with borderline tuberculoid leprosy. The patient was started with WHO MDT multibacillary (Nations et al 1998) adult regimen. Currently he is under follow up and his clinical condition is improving.

Discussion

Leprosy is the leading cause of all non-traumatic peripheral neuropathies worldwide (Nations et al 1998). Nerve injury is a central feature of the pathogenesis of leprosy, as well as responsible for the morbidity associated with the disease. (Job 1994, Shetty and Antia 1997). Clinically, neuritis can be silent with no noticeable signs or symptoms or it can be very obvious and acute, accompanied by severe pain, tenderness, swelling, loss of sensation and paralysis of the muscles.

Among the peripheral nerves, ulnar nerve has been found to be most commonly involved followed by lateral popliteal nerve in various studies reported in literature (Kumar et al 2004, Mahajan et al 1996). Less commonly other nerves are also involved which include the radical cutaneous nerve, sural nerve and superficial peroneal nerves. In our case the patient presented with facial palsy without history of Type 1 lepra reaction over the patch or symptomatic neuritis of facial nerve in past. The facial palsy could be due to silent neuritis of facial nerve. Simultaneously he had enlarged but non-tender great auricular and transverse cervical nerves. There have been reports of facial nerve palsy and enlarged great auricular nerves however involvement of facial nerve, great auricular nerve and transverse cervical nerve simultaneously has not been reported so far. Also there are countable reports of involvement transverse cervical nerve in leprosy. Hence the case will add to the literature regarding involvement of rare nerves in leprosy. This case report also highlights the need to look for involvement of other less common reported nerve involvement while examining and classifying a case of leprosy. Involvement of two and more peripheral nerves, with or without skin lesions qualifies the patient to be given MB MDT and not insufficient and under treatment with PB MDT.

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