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Supraorbital neuralgia in leprosy

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ABSTRACT

Two patients presented with side-locked frontal head pain, involving the supraorbital nerve territory, with an associated hypopigmented macule. The clinical progress and nerve biopsy in one indicated leprosy. In endemic regions, supraorbital neuralgia may be caused by leprosy sometimes without other neurocutaneous markers.

INTRODUCTION

Supraorbital neuralgia is characterised by pain in the region supplied by the supraorbital nerve. The usual cause is inflammation of the supraorbital nerve following periorbital trauma.[1] Key diagnostic features include paroxysmal or constant pain at the supraorbital notch and medial aspect of the forehead, tenderness over the nerve in the supraorbital notch, and abolition of pain by blockade (local anaesthetic) or by ablation of the supraorbital nerve.

Leprosy is a chronic granulomatous disorder caused by *Mycobacterium leprae*. Rarely, this may affect an isolated cranial nerve before other cutaneous manifestations appear, posing a diagnostic challenge and risking delayed treatment.

Case 1

A 30-year-old man reported 2 years of recurring, short-lasting, severe pain in the right frontal region, with associated itching and decreased sensation over the eyebrows. He was from the endemic region of Chhattisgarh state, India, There was a palpable cord-like thickening between the supraorbital ridge and mid-forehead, tapping this evoked an electric pain. Investigations included a normal erythrocyte sedimentation rate and antinuclear antibody profile. CT scan of head showed an enlarged supraorbital nerve manifesting as a medium-sized nodular lesion in the periorbital area. Six months later he developed ulnar nerve thickening with associated skin lesions, suggesting leprosy (figure 1).

Case 2

A 23-year-old man reported 1 year of paroxysmal pain in the left frontal region, with a patch of decreased sensation over the left eyebrow. The supraorbital nerve was thickened and tender to percussion. He had lost the lateral one-third of the left eyebrow with an associated patch of hypopigmentation and decreased sensation. CT scan of head showed an enlarged left supraorbital nerve. Skin biopsy showed perineurovascular chronic inflammatory infiltrate, consistent within paucibacillary leprosy (figure 2).

DISCUSSION

Sjaastad *et al* described supraorbital neuralgia in 1999.[2] Four of the 18 patients reported in literature also had reduced touch or pinprick sensation in

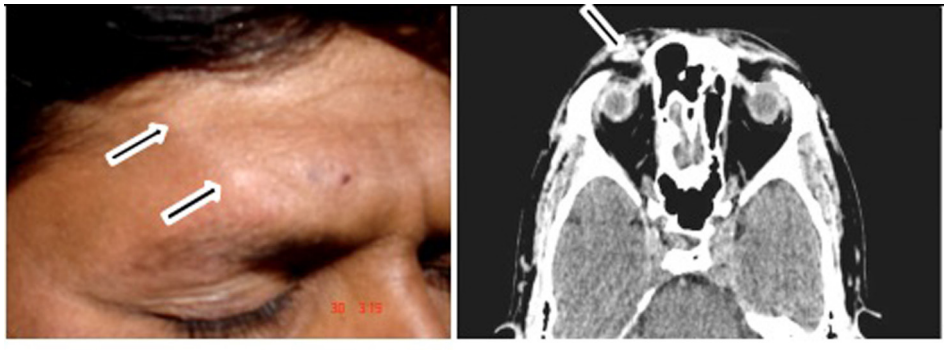

Figure 1 Clinical and CT scan images showing a thickened right supraorbital nerve.

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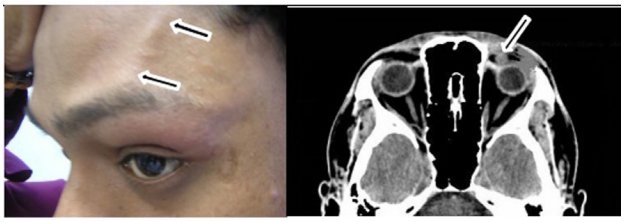

Figure 2 Clinical and CT scan images showing loss of the lateral one third of eyebrow with a hypopigmented patch and a thickened left supraorbital nerve.

the frontal strip above the eyebrows.[3] 'Swimmer's headache' is a variant probably resulting from ill-fitted swimming goggles.[4 5]

In patients with leprosy, the two cranial cutaneous nerves that commonly thicken are the greater auricular nerve and supraorbital nerve above the eyebrow (figure 3). Patients may notice an enlarged nerve, especially if painful or tender. Hansen's neuritis might include decreased sensation in the area innervated by the nerve, depigmentation, hair loss, and tenderness on palpation.[6]

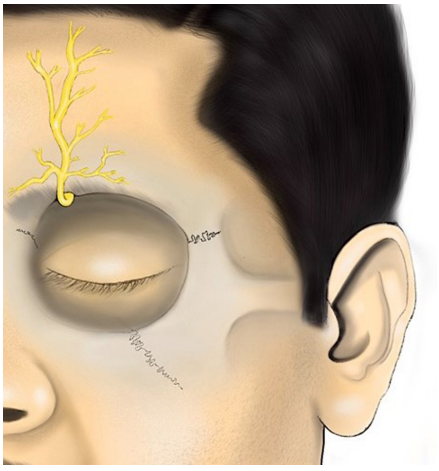

Figure 3 Diagrammatic representation of an enlarged supraorbital nerve in leprosy.

Key points

- Leprosy is an important cause of secondary supraorbital neuralgia in endemic regions.
- Neuroimaging may show enlarged supraorbital nerves.

Although the prevalence of leprosy has fallen greatly, some states of India are still endemic zones.[7] Leprosy remains an important cause of painful cranial neuritis in endemic regions.

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