

## Letter to the Editor

### **‘JHUM-JHUM’ – A COMMON PARAESTHESIA IN LEPROSY**

Editor,

Peripheral neuropathy in leprosy commonly manifests as a progressive loss of sensation and voluntary muscle function. However, at times leprosy patients complain of pain or paraesthesia in leprosy affected limbs. The significance of these symptoms for nerve function impairment is unclear. In Nepal, a syndrome of paraesthesia (‘jhum-jhum’) has been described.<sup>1</sup> Almost 30% of people from a tribal group in southwest Nepal complained of numbness or tingling in a ‘stocking and glove’ distribution. Jhum-jhum is also commonly reported in Nepali patients with leprosy, diabetes, vasculitis and hyperventilation and in those treated with isoniazid.<sup>2</sup>

We examined the records of 277 previously untreated patients enrolling for MDT treatment at Anandaban Leprosy Hospital, Kathmandu, Nepal between 1993 and 1995 and who attended the outpatients department regularly for an average of 30 months (range 6–84 months) for recorded episodes of jhum-jhum. In all, 107 (39%) patients had recorded episodes of jhum-jhum. This is almost certainly an underestimate, as patients were not asked if they experienced symptoms; this study depended on the patient reporting and the doctor recording the complaint. Most jhum-jhum was manifested as burning and tingling sensations (47%) or neuropathic pain alone or in combination with burning and tingling (45%). Some patients gave vivid descriptions of altered sensation such as ‘ants crawling on my skin’. Symptoms were more commonly reported in the extremities: hands only (25%), feet only (20%), both hands and feet (33%) than in the face (4%) or whole body (1.8%). The majority of patients (72%) complained of jhum-jhum in limbs with leprosy-affected nerve supply as evidenced by enlarged nerve trunks or areas of anaesthesia. Jhum-jhum occurred in leprosy patients before (15%), during (61%) and after (24%) anti-leprosy treatment. About two-thirds of patients appeared to have episodic symptoms of jhum-jhum, while in one-third symptoms persisted for many months. The exact length of time the symptoms persisted could not be determined accurately from our records. Although associations with clinical parameters could not be drawn with confidence from this retrospective study, there was an association between the frequency of reported jhum-jhum and age (Chi-squared test for linearity = 10,  $P < 0.005$ ). This may reflect an increase of paraesthesia in older persons in general, rather than a specific leprosy association. There was no apparent association with gender or with type of leprosy disease (pauci- or multibacillary) or with the occurrence of either type 1 or ENL reactions.

This high frequency of paraesthesia in leprosy patients is deserving of further attention. This complaint, though distressing to the patient, is generally left untreated by the physician unless there is evidence of nerve function impairment. Although we could find no evidence in this selected group of patients for any association of jhum-jhum with loss of nerve function, the question remains open as to whether these symptoms are associated with loss of function. In the early twentieth century, paraesthesia were noted as a presenting symptom in leprosy patients and this progressed to frank anaesthesia.<sup>3,4</sup> Alteration in sympathetically mediated vasodilation and the sweat response has been documented to parallel degeneration of sensory nerves in leprosy affected limbs.<sup>5</sup> The extent to which leprosy-related paraesthesia is due to autonomic nerve degeneration cannot be commented upon here, since no measurements of jhum-jhum affected patients’ autonomic skin or other responses were made. Whatever the cause of persistent neural paraesthesia, the end result physiologically is that spinal dorsal horn

neurons cease giving inhibitory input to primary afferent pain neurons in affected limbs, allowing spontaneous firing of the afferent neurons when there is no stimulation.<sup>6</sup>

Paraesthesia and neuropathic pain is frequently associated with psychopathology. In Nepal, about 25% of adults in a general clinic were shown to have high scores on the WHO SRQ-20 depression scale (Wright, 1988, unpublished observations) and while none presented with psychiatric complaints, all had somatic symptoms including jhum-jhum. Among the Nepali villagers complaining of jhum-jhum, 48% had neurotic symptoms and 62% displayed at least one psychotic symptom.<sup>1</sup> Mental health training programmes in Nepal now teach peripheral health workers to screen all those who present in general clinics with jhum-jhum for signs of depression.<sup>7</sup>

Among leprosy patients, depression may be a significant problem and this may contribute to or be associated with somatic symptoms such as jhum-jhum. The extent of the contribution of psychopathology to neuropathic pain and paraesthesia in leprosy remains to be elucidated. Psychopathology in neuropathic pain syndromes has been documented: in one study of 59 patients with painful diabetic neuropathy; all had elevated depression scale scores, and all had some alleviation of their painful neuropathy on treatment with antidepressants.<sup>8</sup> In an unpublished survey in Nepal, 20% of leprosy patients had an elevated YMO-SRQ20 score (Theuvenet, personal communication).

The differential diagnosis of peripheral paraesthesia-causing neuropathies is vast, and includes other hypovitaminoses (such as deficiency of thiamine, called cerebral beriberi, or of cyanocobalamin), connective tissue diseases such as amyloidosis, chronic poorly controlled diabetes mellitus, toxin ingestion (pesticide organophosphates, hexane and other fat-soluble hydrocarbons, and lead), isoniazid treatment of tuberculosis, metabolic diseases such as porphyria or uraemia, viral syndromes such as herpes zoster, chronic demyelinating diseases and a variety of rare genetic disorders.<sup>9</sup> Of these, possibly only diabetes mellitus and treatment for tuberculosis were likely to have been detected in the Anandaban Leprosy Clinic, since all leprosy patients are screened at least at the time of initial presentation for tuberculosis and diabetes mellitus.

In summary we have evidence that parasthesia is a common complaint among leprosy patients. There is a need to determine the full extent of the problem and the degree of association with psychiatric illness, particularly depression. The possible link to frank nerve function loss also needs to be established. The ready treatment of neuropathic pain with antidepressants, particularly the tricyclic antidepressants, may be an important palliative treatment option for leprosy patients with jhum-jhum.

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