

# THE EFFECTIVENESS OF CORTICOSTEROIDS IN THE TREATMENT OF LONG-TERM NERVE FUNCTION IMPAIRMENT

Sir,

There is indication that treatment with corticosteroids of patients with nerve function impairment (NFI) of long term duration (> 6 months) results in improved nerve function in a number of patients.<sup>1</sup> This finding in itself is important enough to warrant further well-controlled investigation. The potential for preventing (further) disability is significant while the risks of treatment are limited. In preparation of a possible randomized controlled trial we performed a pilot study, basically repeating the original study done by Moet & Rongong.

A total of 14 leprosy patients were selected with NFI of between 7 and 24 months duration from among patients in two leprosy clinics of the Danish-Bangladesh Leprosy Mission (DBLM) in NW Bangladesh. All patients except one were receiving MDT; the remaining patient was released from treatment. Each patient had a full nerve function assessment by a physiotechnician and was then given the standard dose of prednisolone used in the field (starting dose 40 mg/day, tapered off over 4 months). An assessment was made at the end of prednisolone treatment and results compared.

Sensory and motor loss was recorded on a special form which records each anaesthetic point on soles or palms as 1 point (max. 11 for soles, 12 for palms); corneal anaesthesia as 2 points; and 1 point for every step reduction in modified MRC grades for motor function in eye closure, little finger abduction, thumb abduction, wrist extension and foot dorsiflexion. In addition, eyelid gap on gentle closure was scored 1 point per 1-mm gap. Anaesthesia was tested using a ball-point pen. Zero indicates normality; increasing scores indicates increasing levels of nerve damage.

There were 13 males and 1 female with a mean age of 34.6 years (range: 20–60 years); 8 were MB and 6 PB. The mean duration of NFI was 16 months (range: 8–24 months). Seven patients had sensory and motor NFI; 6 patients sensory, and 1 patient motor NFI only.

Table 1 shows the results of nerve function testing before and after treatment with corticosteroids. 'Full' indicates return of nerve damage score to 0, i.e. no nerve function impairment; recovery was by at least 2 points in the nerve function score. 'Partial' indicates any recovery of

**Table 1.** Level of recovery of sensory and motor function

Level of recovery	Sensory		Motor	
	No.	(%)	No.	(%)
Full	3	(23)	3	(37.5)
Partial	4	(31)	1	(12.5)
Same	6	(46)	3	(37.5)
Deteriorated	0		1	(12.5)
Total	13		8	

function (2 points or more in nerve damage score); 'Same' indicates no significant change; and 'Deterioration' indicates further loss of nerve function (2 points or less in nerve function score). Table 2 shows the mean differences in nerve function scores before and after prednisolone treatment.

This pilot study was carried out with the aim of testing the hypothesis that prednisolone is effective in restoring nerve function in leprosy patients where the period of nerve damage exceeds 6 months. The results indicate that there is benefit, confirming the previous study undertaken in Bhutan.<sup>1</sup> A randomized controlled trial will be conducted to substantiate these results.

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## Reference

<sup>1</sup> Moet FJ, Rongong NT, Prednisolone treatment in longer standing sensation loss. *Int J Lepr*, 1993; **61**: 19A.