PURE (PRIMARY) NEURITIC LEPROSY ITS CONSERVATIVE AND SURGICAL MANAGEMENT A SIX YEAR STUDY AT MOHAKHALI LEPROSY CONTROL INSTITUTE AND HOSPITAL, DHAKA

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SUMMARY

There is a lack of knowledge regarding the types of leprosy cases attending the different hospitals in Bangladesh. The purpose of this study was to analyse the pure neuritic leprosy. The study was done at Mohakhali Leprosy Control Institute and Hospital, Dhaka, Bangladesh from January 1993 to December 1998. All the patients attending the Reconstructive Surgical out patient department were registered. Diagnosis was done by history and physical examination. Neuritic leprosy was diagnosed if there was anaesthetic skin area, weakness and wasting of muscles or tingling sensation/neuralgic pain accompanied by nerve trunk thickening. We studied clinical features and progression of 92 cases of pure neuritic leprosy. Numbness was the main presenting symptom. Mononeuritis involving the ulnar nerve, followed by the common peroneal nerve was the commonest problem. Slit skin smear for AFB was negative in all cases. We treated all 92 cases with a combination of Dapsone and Rifampicin and 2 cases developed a skin lesion after an average duration of 3 months.

INTRODUCTION

Leprosy is regarded as the commonest cause of severe neuropathy. However pure neuritic leprosy has always been a controversial subject. Cochrane[1] et al and Noordeen[2] preferred the term neutitic to poly neuritic because many cases present with a monoeuritis. Further confusion arose with the use of the term primary neuritic for cases where nerve trunk involvement was secondary to development of a skin lesion. The term neuritic leprosy is used as synonymous with pure primary neuritic leprosy.

PRESENTING SYMPTOMS IN CASES OF PNL TREATED WITH MDT.

	Initial Complaint	No. of Cases
1.	Numbness	44
2.	Weakness	17
3.	Wasting of Muscles	11
4.	Deformity	10
5.	Tingling Sensation/Pain	10
	Total	92

TABLE – I

MATERIAL AND METHODS

We analysed data of 92 cases of neuritic leprosy amongst male who had been treated with MDT –dapsone 100mg per day rifampicin 600mg per month between 1993 and 1998. Neuritic leprosy was diagnosed if there was anaesthetic skin area, weakness and wasting of muscles, or tingling sensation and neuralagic pain accompanied by nerve trunk thickening. Routinely, a skin biopsy was done before treatment from a maximal anaesthetic area and if histopathological evidence of leprosy was found the case was excluded from the study. Slit skin smear (SSS) was performed from both ears, foreheads and an anaesthetic area in all cases. Nerve biopsy was performed in 12 cases. All these cases were offered institutional antileprosy treatment for 6 months to 1 year. A skin biopsy was performed in those cases that developed skin lesions during institutional therapy. Epineurotomy was done in 24 cases due to sever nerve compression.

RESULTS

The details of complaints at onset in 92 neuritic cases are given in Table–1 and the commonest was numbness. The average age was 36 years. None of these patients had any family history of leprosy and no regional predilection was noted. The details of nerve involvement are given in Table–2. SSS for AFB was negative in all cases. All 92 cases were put on multi drug therapy (MDT) and two developed skin lesions after an average period of three months following therapy. The subsequent diagnosis in these two cases was that of borderline tuberculoid and pure tuberculoid leprosy.

DISCUSSION

Pure neuritic Leprosy is not common in our country. It has been reported that 5.5% to 17.7% of all Leprosy cases are neuritic in type. In this study we found ulnar nerve invduema in 32 % as reported by upleka and Antia.[3] Noordeen[2] observed the common peroneal to be commonly involved. Experimental evidence has suggested the skin as well as the upper respiratory tract[4] to be the routes of entry for M. Leprae. We feel that entry through the skin produces the mono neuritic type of disease while the respiratory route may be responsible for the polyneuritic type of disease. It has been postulated that after entering through the skin M. Leprae invades axonoplasmic filamates and only

DETAILS OF NERVE INVOLVEMENT

	Nerves Involved	No. of Cases
1.	Ulnar	32
2.	Common Peroneal (Lat. Popliteal)	23
3.	Radial	03
4.	Lateral Cutaneous Nerve of Forearm	12
5.	Greater Auricular	84
6.	Supraorbital	02
7.	Superficial Peroneal	11
8.	Sural	03
9.	Posterior Tibial	07
10.	Multiple Nerves	09

TABLE – 2

after rupture of the Schwann sheath can the organism burst into the corium of the skin.[3] Therefore the bacillary load in nerves is found to be higher than that observed in the associated skin lesion. Only two patients out of 92 on multidrug therapy observed subsequently developed skin lesions. This suggests that prompt and better killing of the organism by MDT arrests the spread of the disease from the nerves to the skin. Skin lesions develop in neuritic leprosy only when treatment is irregular. Noordeen[2] observed that there is a tendency for spontaneous regression of a thickened nerve even without treatment. However, we observed that cases with a relatively longer duration of illness did report with weakness and deformity.

Miralgia paresthetica (Entrapement Lateral Femoral cutaneous nerve of the thigh) is the important clinical differential diagnosis in neuritic leprosy. These cases do not improve on antileprosy treatment and local infiltration of lignocaine and steroids medial to the anterior superior iliac spine has been reported to improve this condition in some patients. Sometimes compression of the lateral popliteral nerve due to prolonged working in a squatting posture leads to weakness/anaesthesia of the foot. However, this is transitory and should be carefully, excluded.

REFERENCES

1. Cochrane RG, Smyly HH. Leprosy in theory and practice in, Cochrane RG, Davey DF (ed), Bristol: Jhon Wrissgut and Sons 1964; 203.
2. Noordeen SK. Epidemiology of (Poly) neuritic type of Leprosy. Lepr. India 1972; 44: 91.
3. Uplekar MW, Antia NH. Clinical and histopathological observations on pure neuritic Leprosy, India J lepr, 1986; 58: 521.
4. Barton RPE. A clinical study of the nose in Lepromatous Leprosy. Lepr Rev, 1974; 45: 135.