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Extended Abstract

Management of leprosy reactions : facing the realities

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The clinical course of leprosy is altered by episodes of type 1 and type 2 reactions. This adds significantly to the disease morbidity and occasional mortality. Continuing episodes of reactions even after 'release from treatment' and nerve impairment related deformities are challenges in management of these patients. Recurrent leprosy reactions necessitate long-term treatment, often for indefinite period.

Following elimination of leprosy in India, our focus is to improve health related quality of life (HRQL) of the patients suffering from the disease at present and those who had it in the past. Lepra reactions and their sequelae are the principal determinants of HRQL in them. Several obstacles are there on the way to effective management of reactions.

In an Indian study on leprosy reactions, 31% of the patients had reactions as the presenting feature (Kumar 2004). Of these, 21% had type 1 and 11.8% had type 2 reactions. Recurrent episodes of ENL were as high as 64%. Hence, effective management of reactions should be emphasized as an integral part of leprosy control programme in India.

In a tertiary care hospital in south India, 148 new cases of leprosy (excluding indeterminate and histoid leprosy) were examined from March, 2006 to August, 2009. Type 1 reaction was recorded in 32 patients among 127 (BT, BB, BL and pure neuritic) cases (25.19%). Type 2 reaction was recorded in 10 patients among 67 (BL and LL) cases (14.92%). Recurrent type 1 reaction was recorded in 20 patients and late reaction in 8 patients. All 10 patients had recurrent episodes of ENL, 6 beyond 2 years of completion of MDT. Most of these patients were daily wagers, status below poverty line.

Patients with type 1 reaction were treated with 40-60 mg of prednisolone at gradually tapering dosage with or without NSAIDS. Patients with type 2 reaction were treated with either of the three treatment regimes; prednisolone (40-60 mg) + clofazimine (300 mg), prednisolone + azathioprine / cyclophosphamide / pentoxifylline or thalidomide (200-300 mg) + prednisolone. MDT and general measures were continued as appropriate. Regimes containing azathioprine and cyclophosphamide were slowly effective with erratic results and needed close monitoring. Pentoxifylline was effective in reducing the constitutional symptoms associated with type 2 reaction but did not prevent recurrence.

The problems encountered while managing reactions in these patients has been presented in Figure 1. The principal causes of failure in

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effective management of reactions were found to be:

i. Non-compliance to drugs and treatment failure
ii. Lack of ample facilities for corrective / reconstructive surgeries.

The various factors leading to non-compliance to drugs are as follows:

i. Prolonged treatment schedules
ii. High cumulative cost of the drugs
iii. Severe side effects, leading to mortality in few cases
iv. Severe psychological impact due to recurrence of reactions in spite of regular treatment, leading to loss of faith on treating physician and default
v. Lack of free supply of drugs used for reaction
vi. Difficulties in availability of thalidomide

In the management of recurrent reactions, prolonged treatment with prednisolone is required. While tapering the dosage below 25-20 mg, often there is relapse of reaction, necessitating continuation of prednisolone at this minimum required dose to control the disease. This gives rise to Cushingoid features which is unacceptable to many especially younger patients. The alternative drug thalidomide is not affordable by most patients as it is costly and not available in many parts of the country. Clofazimine is used at a dosage of 300 mg / day as an adjuvant to prednisolone in the treatment of type 2 reaction. In recurrent type 2 reactions, clofazimine may have to be used for nearly a year (Sehgal 2007) resulting in intense red color of the skin and conjunctiva, causing great resentment to the patient. Moreover, such high dosage of the drug for prolonged period increases the risk of enteropathy. Long term use of prednisolone increases the risk of widespread pulmonary tuberculosis, septicemia, osteoporosis and related complications like avascular necrosis of the head of the femur and compression fracture

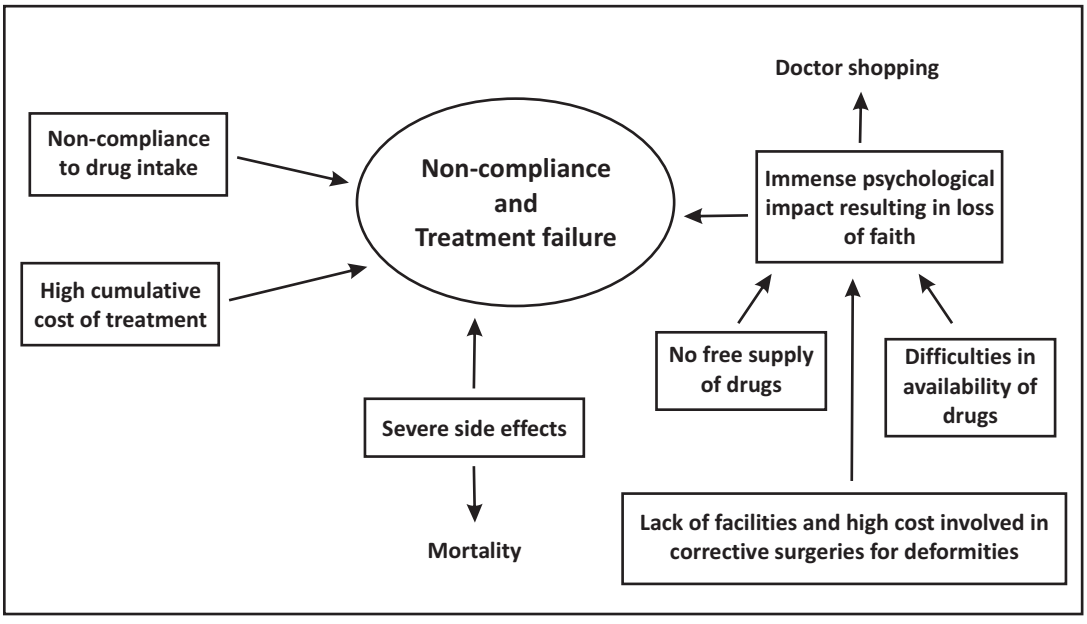

Figure 1 : Difficulties encountered in management of reactions.

of vertebrae resulting in quadriplegia or paraplegia.

Cumulative cost of the drugs like prednisolone and clofazimine is high for long-term treatment, this is more so with thalidomide which is a costly drug and the treatment duration required is several months (Walker 2007).

Among the drugs available in rural set up, there are not many to choose. Physicians have to deal reactions mostly with prednisolone with occasional combination with other drugs. In recurrent cases, some observant patients may note that he is being prescribed the same medication in different doses. In such situation, they learn and practice self medication with prednisolone with waxing and waning of symptoms. Moreover, as their expectation for 'a better or newer drug prescribed by the doctor' remains un-fulfilled, they lose faith on the 'same prednisolone' and also on 'the doctor' and go for 'doctor-shopping.'

The psychological impact of reactions on the patient is quite severe. Type 1 reaction involving lesions on face and other exposed body parts gives patient a socially unacceptable look, making them unable go around to school, common water sources and at other public gatherings. Recurrent debilitating episodes of ENL make the patient bed-ridden for several days causing loss of daily wages. When housewives from low socio-economic strata, who have to manage the daily household chores, suffer similar illness, familial disharmony arises and occasionally results in broken marriage.

Deformities developing from reactions are stigmatizing. There are few referral centers all over India for free reconstructive surgery of deformities resulting from leprosy. However, these specialized centers are not easily accessible by most of the patients because of distance. Moreover, facilities can be availed at such centers only through proper channel after fulfilling necessary formalities which is a time-taking process. Inconvenient and patient un-friendly system averts many patients to approach these. Such circumstances force them to approach private set ups for devices like MCR footwear, splints and for corrective surgeries which turns out to be costly.

These problems may be overcome by intervention at different levels. At individual level, all physicians must gradually sensitize the leprosy patients about reactions through counseling. This should be at the initiation of MDT during each monthly visit and also during release from treatment. Such counseling must highlight the cause, natural course and probable complications related to it and available treatment modalities. At the level of government, arrangements may be made for free supply of drugs for reaction at hospitals. Drugs like thalidomide may be made available at select referral centers at a reduced cost. Establishment of more zonal and regional centers for reconstructive surgery of deformities related to leprosy is the need of the hour where these patients can approach directly for free of cost and hassle-free management. Recurrent reactions remind us that even after 'cure' of leprosy, 'the disease' is 'not cured'. Perhaps 'cure' of this debilitating disease lies in effective management of reactions.

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