A study of newly detected cases of leprosy, defaulters and efficacy of an intensive treatment schedule in a rural setting in Sri Lanka

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Introduction and justification

Leprosy is a chronic granulomatous skin disease caused by Mycobacterium leprae. The WHO declared that Sri Lanka has reached elimination target in 1995. Currently around 2000 new cases of leprosy are reported annually in Sri Lanka. According to the clinic records in Dermatology Unit, BH Puttalam, new cases are being detected continuously from Thambapanni village. Thambapanni village is situated about 5 km away from Puttalam town. Majority living in the area are Muslims and all are internally displaced from North as the result of war. Recent household surveys conducted by Dabrere T M E *et al*[1] in June 2012 at Thambapanni village, 53 suspected cases of Leprosy were identified among 939 people examined.

During the household survey,

1. Patients with confirmed diagnosis were issued the first pack of MDT (Multi Drug Therapy - WHO recommended standard drug regime for leprosy) at the mobile clinic held at the site and were referred to the dermatology clinic at Base Hospital, Puttlam for follow up.
2. Others, in whom the diagnosis could not be confirmed, were referred to the Dermatology clinic.

After a period of one year in 2013, it was observed that there were many defaulters. These defaulters are not only making themselves vulnerable to many complications of the disease but also endangering the well being of their family members and the society. Therefore this study was conducted to assess feasibility of an intensive treatment programme for improved case detection and case holding in a leprosy endemic pocket in Sri Lanka.

General objective

Assess the effectiveness of an intensive treatment programme for improved case detection and case holding in leprosy.

Specific objectives:

1. Introduce an intensive treatment programme for case holding in an leprosy endemic population.
2. Assess the effectiveness of an intensive treatment programme for improved case detection and case holding in leprosy.
3. To assess the satisfaction of the patients who complete the treatment regarding the programme.

Study setting

The study was carried out in Thambapanni village in Puttalam. All the residents who were living in 166 households in the Thambapanni village were the study population. Newly diagnosed leprosy patients and defaulters from Thambapanni village during the study period were taken as study population. Study was conducted for one year period from January 2014.

Methodology

The study was done in two phases.

Phase 1.

Carried out retrospectively for a 1 year period prior to the beginning of Intensive Treatment Programme (ITP).

Data collection was done by using, household survey conducted in the village population in 2012 and clinic records, individual patient forms and Multi Drug Therapy records available in the skin clinic Base Hospital, Puttalam.

Phase 2.

The following two methods are adopted during the ITP.

1. **Home to home visit were done for searching leprosy cases identified in the phase 1.** At the

beginning of the study, the people in each dwelling were educated regarding leprosy, it's possible complications, endemic nature of the disease in their village, and importance of compliance. This had made them well aware of the intensive treatment programme. The medical team was comprised of the Consultant Dermatologist, Medical Officer attached to Dermatology clinic, Nursing Officer, Public Health Inspector and a clinic labourer. Regional Epidemiologist also participated sometimes. People were addressed in accordance with their religious beliefs and culture.

2. **Establishment of monthly clinics at the study area.**

People were informed about the mobile clinic schedule and home visits in advance. All the essential services including health education, family screening, routine laboratory investigations and treatment for the leprosy and its complications were provided in these clinics. Mobile clinics were held in a hall belongs to the village Mosque. Regular follow up of diagnosed cases and detection of new cases from people who presented to clinic due to public awareness were continually carried out at these clinics similar to regular skin clinics in hospital. Whenever patients were not appearing in the mobile clinics, they were visited by the medical team and given the treatment at their home. They were permitted to visit skin clinic at B H Puttalam for any related problem in between the mobile clinic dates.

All patients newly diagnosed with leprosy during the study period had defaulted leprosy patients from the Thambapanni village were included in this study, as everybody has given the consent.

Patient satisfaction questionnaire (self administered) was used to assess their views regarding the programme at the end of treatment course. It was assessed in terms of quality of services provided in treatment of leprosy and other skin conditions, health education, basic facilities like availability of appropriate furniture, examination area, etc. attitude and courtesy of medical staff, protection of privacy in home visits and mobile clinics.

Results and discussion

According to the results of the phase 1 fourty cases were diagnosed as confirmed leprosy in the study population. However only 8 patients had taken the recommended course of multidrug therapy and the rest have defaulted. Ten of the defaulters had taken only the first pack of the therapy. Fourteen patients had not come to collect even the first pack. Other 8 patients had defaulted at various levels of treatment. Total of thirty five patients were detected during ITP. Majority of them were females (26 cases) with 9 males. Their age distribution and the level of education are shown in Figure 1 and 2, respectively. Out of the 35 cases 17 were new cases while 18 were previously defaulted cases. Among them there were six paucibacillary (PB) child cases, twenty three PB adult cases and six multibacillary (MB) adult cases. Findings of six childhood cases were indicative of ongoing active transmission among the villagers. During the ITP, all 35 cases had completed the recommended course of multidrug therapy.

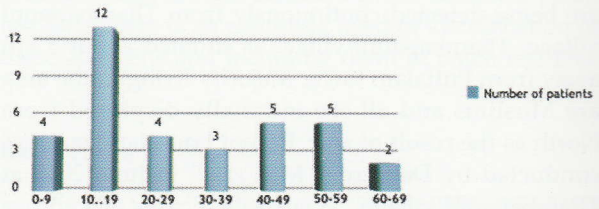


Figure 1. *Age distribution in ITP cases.*

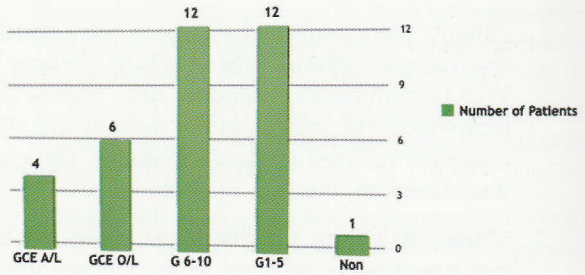


Figure 2. *Level of education.*

The Treatment Completion Rate (TCR), (case holding rate) in ITP was 100% whereas it was only 20% prior to introduction of ITP, with statistically significant difference ($p < 0.0001$). (Figure 3 and 4).

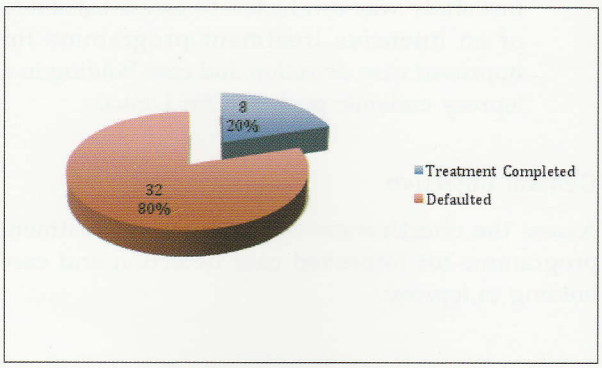


Figure 3. *Treatment Completion Rate in Phase 1 (Before ITP).*

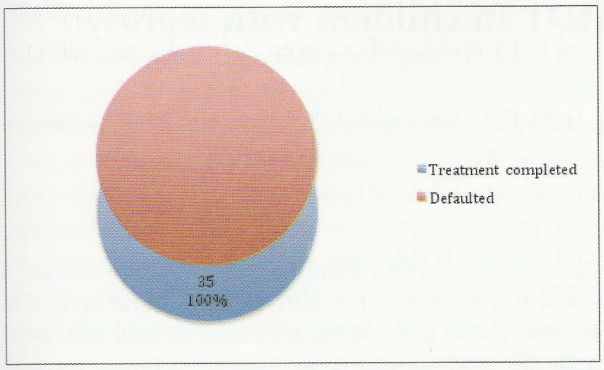


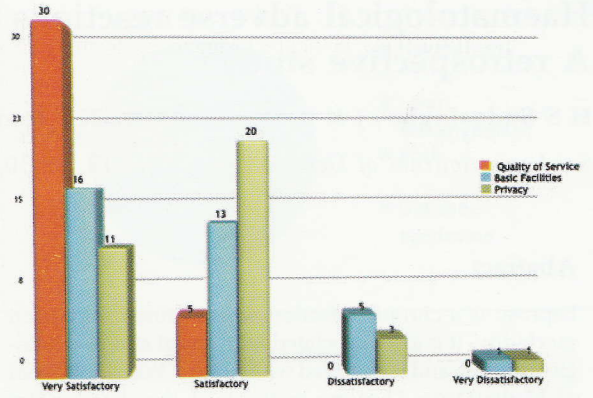
Figure 4. *Treatment Completion Rate in Phase 2 (i.e. After ITP).*

Case detection was very high with 17 new cases within around 1000 (939) population in the village. This figure is very high (1700 fold) in comparative to the Sri Lanka's new case detection rate of leprosy (i.e. 9.6 per 100,000), which is mainly based on self-referral.

There was a high degree of patient satisfaction as well (Figure 5). All the patients happily accepted home visits by medical team and all of them preferred to attend mobile clinic at the village than hospital clinic. All of the patients were satisfied with the quality of the services provided, while 83% were satisfied with basic facilities, 88% with protection of privacy. Overall patient satisfaction on ITP was 90%.

However if we could provide adequate furniture and other basic facilities including modern educational materials and multimedia and a better place for the clinic, the programme would be more attractive and patient satisfaction would be even better.

No significant organizational, operational, technical or financial issues were encountered in the ITP as regular skin clinic staff and transport facilities of the regional epidemiology unit were utilized.



Satisfactory = Attaining just one's expectation

Very Satisfactory = Above one's expectation

Dissatisfactory = Below one's expectation

Very Dissatisfactory = fails to meet one's expectation leading to disappointment

Figure 5. *Level of patient satisfaction.*

Therefore this Intensive Treatment Programme was highly effective and feasible even in poor resource settings to eradicate leprosy in endemic pockets of Sri Lanka.

References

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