

## Treatment Behaviour of Leprosy Patients on Time Scale

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Leprosy is not a disease of modern civilization and industrialization, but its origin is as old as 4600 BC. Although the cure of leprosy is possible by MDT, there are certain misbeliefs in the mind of leprosy patients leads to delay in disease reporting. Wandering of the patient from one healer to another healer also one of the cause that delays the start of MDT. It is known fact that the delayed response in getting medical treatment for leprosy causes permanent physical deformities in the patient. This study is aimed to identify the treatment behavior of leprosy patients on time scale. A total of 251 study subjects were selected randomly attending the Skin & VD OPD of S S Hospital of IMS, BHU, Varanasi. Questions related to treatment behavior on time scale were administered to leprosy patients aged 15 years or above by the interviewer himself. Time gap to start the initial treatment was significantly less in MB cases (5.3 months) as compared to PB cases (7.2 months). MB cases wasted significantly more time with allopathic treatment other than MDT. Urban patients (1.3 months) wasted more time with homeopathy than the rural patients (0.9 months). More than half the cases (51.4%) went for the treatment within three months of noticing symptoms of leprosy. There is a considerable delay in starting the MDT after noticing the first symptom of leprosy. As early as possible, measures to start the proper treatment i.e. MDT should be taken to avoid permanent disability due to leprosy.

**Keywords:** Leprosy, treatment behaviour, Alternative medicine, time scale

### Introduction

Leprosy is not a disease of modern civilization and industrialization, but its origin is as old as 4600 BC (Thangaraj 1983). In India, leprosy was referred to as "Kushtha" in ancient Vedic writings scripted as back as 1400 BC. Probably the name Kushtha was derived from "Kushanti", which means eating away (Thangaraj and Yaawalkar 1988). Although the cure of leprosy is possible by MDT, there are certain misbeliefs in the mind of leprosy patients. Lack of belief or confidence in

conventional medicine, which often conflicts with the facts and usually leads to patient seeking primary treatment from local healers. Wandering of the patient from one healer to another healer delays the start of MDT. It is known fact that the delayed response in getting medical treatment for leprosy causes permanent physical deformities in the patient and gives an unhygienic picture that forces fellow people to look at the leprosy patient hatred (Thomas 1983). Patients take treatment from various types of medical/non-medical

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agencies such as home remedies, medico-religious treatment, indigenous drugs, unqualified doctors (quacks), qualified doctors, government hospitals, dispensaries and leprosy clinics. To implement the NLEP more sincerely, it is pertinent to identify the treatment behavior of leprosy patients on time scale.

### Material and Methods

Patients mainly from eastern UP and adjacent western part of Bihar find their most common destination as S. S. Hospital, BHU, Varanasi. Varanasi is also one of the most favoured religious destinations. Leprosy is firmly associated with religion. So, patients were selected from Dept. of Skin & VD of S.S. Hospital, BHU, Varanasi. A pilot study was conducted on 50 leprosy patients attending the OPD of Department of Skin & VD and required sample size was calculated to be 225. Assuming the attrition rate of 10%, the sample size of present study was fixed at 250. Cases who noticed their symptoms within preceding two years were included in the study. As the objectives of the study were to know the treatment behaviour, this period was neither too short to use the different systems of medicine nor too long to allow the recall factor to crop in. Children below 15 years were not taken as it may not be possible to get complete information on use of alternative medicine for leprosy. Primary tool used was a predesigned and pretested interview schedule, prepared in Hindi, keeping the language of the respondents in mind. The questionnaire contained either semi structured or open ended (wherever structuring was not possible) questions. The questions were explained to the patient and his/her response was recorded by the interviewer himself, so that least inter-observer variation crop in. SPSS statistical software was used.

Time gap to start the initial treatment is significantly less in MB cases (5.3 months) as

compared to PB cases (7.2 months). Similarly MB cases went earlier for MDT than PB cases (7.9 months vs 8.4 months). Mean duration of previous MDT like MDT under NLEP or from private practitioner in case of PB patients (4.1 months) were marginally more than MB patients (3.8 months) while this was reversed when duration of MDT from our hospital was considered (2.1 months vs 3.5 months). MB patients wasted significantly more time with allopathic treatment other than MDT. Mean duration of homeopathic treatment is more in PB cases (1.1 months) than MB cases (0.9 months), with period of stay varying from 1 month to 12 months. Both PB and MB cases stayed for almost equal / equal duration with Ayurvedic medication and other medication.

Duration of previous MDT and present MDT were more in case of rural patients. Mean period of allopathic therapy other than MDT was significantly more in urban cases (1 month) than in rural cases (0.6 month). There was a significant difference in duration of stay with homeopathy between urban (1.3 months) and rural patients (0.92 months). Rural patients wasted significantly more time with other treatments like treatment by traditional healers and magico-religious practices.

More than half of leprosy patients (51.4%) went for the therapy within three months of noticing the symptom of the disease. 14.3% of the patient ignored their symptoms for more than 12 months. Female patients (26%) were about double in number than the male patients who did not take any treatment for more than a year.

Majority of patients (61.8%) started MDT within six months of noticing the symptoms of leprosy. More than one fifth (20.7%) patients of leprosy took more than 12 months time to start MDT. There was significantly more number of females (34.6%) than males (17.5%), who went for MDT

after one year. Residential status and type of disease did not significantly influence the time lapsed in starting MDT.

### Discussion

Table 1 shows that time gap to start the initial treatment is significantly less in MB cases (5.3 months) as compared to PB cases (7.2 months). Similarly MB cases went earlier for MDT than PB cases (7.9 months vs 8.4 months). The severity of symptoms is more in MB cases. That is why the consult the doctor earlier. Mean duration of previous MDT like MDT under NLEP or from private practitioner in case of PB patients (4.1 months) were marginally more than MB patients (3.8 months) while this was reversed when duration of MDT from our hospital was considered (2.1 months vs 3.5 months). But these were statistically insignificant. When an MB case is diagnosed and put on treatment, duration of total treatment is more and the number of drugs and its side effects are also more. On the other hand the relief from symptoms, especially from 'loss of sensation' takes a long time. Those patients who are not counseled properly, while putting on treatment, wanders from one

treatment provider to another and the duration of proper treatment i.e. MDT is less.

In our study, MB patients wasted significantly more time with allopathic treatment other than MDT. Mean duration of homeopathic treatment is more in PB cases (1.1 months) than MB cases (0.9 months), with period of stay varying from 1 month to 12 months.

Both PB and MB cases stayed for almost equal / equal duration with Ayurvedic medication and other medication.

Kumar and Anbalagan (1983) found a mean time lag of 0.85 years to start the treatment, which is comparable to our study (7.2 months in PB and 5.3 months in MB). Contrary to this finding there was a longer delay in lepromatous patients in a study in Nepal (Robertson et al 2000). In this study time gap between starting MDT and starting first treatment is more in MB cases than PB cases, because MB cases are wasting more time with allopathic treatment other than MDT.

Table 2 shows duration of previous MDT and present MDT were more in case of rural patients. Mean period of allopathic therapy other than MDT was significantly more in urban cases

**Table 1 : Treatment behavior of leprosy patients on time scale according to type of disease**

	Time lapsed in month (Mean $\pm$ SD)	
	PB	MB
<b>No.</b>	75	176
Duration of symptom	13.2 $\pm$ 8.27	17.34 $\pm$ 7.78
Time gap to start the t/t	7.20 $\pm$ 7.12	5.31 $\pm$ 5.92
Time gap to start MDT	8.36 $\pm$ 7.34	7.95 $\pm$ 6.99
Duration of previous MDT	4.14 $\pm$ 6.22	3.83 $\pm$ 5.12
Duration of present MDT	2.10 $\pm$ 5.27	3.45 $\pm$ 6.42
Duration of allopathy other than MDT	0.40 $\pm$ 1.13	0.78 $\pm$ 1.50
Duration of homeopathy t/t	1.08 $\pm$ 2.14	0.92 $\pm$ 1.81
Duration of ayurvedic t/t	0.36 $\pm$ 1.22	0.46 $\pm$ 1.84
Duration of other t/t	0.15 $\pm$ 0.52	0.15 $\pm$ 0.65

**Table 2 : Treatment behavior of leprosy patients on time scale according to residence**

Residence	Time lapsed in month (Mean $\pm$ SD)	
	Rural (116)	Urban (35)
<b>Treatment</b>		
Duration of previous MDT	4.11 $\pm$ 5.52	2.80 $\pm$ 5.33
Duration of present MDT	3.18 $\pm$ 6.21	1.86 $\pm$ 5.12
Allopathy other than MDT	0.60 $\pm$ 1.31	1.00 $\pm$ 1.82
Homeopathy	0.92 $\pm$ 1.95	1.31 $\pm$ 1.77
Ayurvedic	0.44 $\pm$ 1.71	0.35 $\pm$ 1.26
Others	0.17 $\pm$ 0.65	0.05 $\pm$ 0.21

**Table 3 : Time lapsed (month) in starting the first therapy after noticing the first symptom**

	No.	Time in months			
		0-3	3-6	6-12	>12
Total	251	51.40	25.89	8.37	14.34
<b>Gender</b>					
Male	196	55.85	25.93	9.12	12.10
Female	55	43.30	26.77	3.94	25.98
<b>Residence</b>					
Rural	216	52.23	26.04	7.80	13.92
Urban	35	45.95	26.13	11.71	16.21
<b>Type of disease</b>					
PB	75	42.96	26.71	10.47	19.86
MB	176	55.62	25.72	7.25	11.41

(1 month) than in rural cases (0.6 months). There was a significant difference in duration of stay with homeopathy between urban (1.3 months) and rural patients (0.92 months). Rural patients wasted significantly more time with other treatments like treatment by traditional healers and magico-religious practices.

Possible explanation about urban patients wasting significantly more time with allopathic treatment other than MDT and with homeopathic treatment than the rural patients could be presence of more number of allopathic and homeopathic practitioners in urban area.

Table 3 shows that more than half of the leprosy patients (51.4%) went for the therapy within three months of noticing the symptom of disease. 14.3% of patients ignored their symptoms for more than 12 months. Female patients (26%) were about double in number than the male patients who did not take any treatment for more than a year.

Similar to our finding Rao et al (1996) found that the gap between noticing a symptom and seeking medical confirmation was considerably longer for women (13.8 months in male and 18.5 months in females). In the present study 77% patients went

**Table 4 : Time lapsed (month) in starting the MDT after noticing the first symptom**

	No.	Time in months			
		0-3	?3-6	?6-12	?12
Total	251	38.65	23.10	17.93	20.72
<b>Gender</b>					
Male	196	40.46	24.07	17.95	17.52
Female	55	27.56	18.90	18.90	34.64
<b>Residence</b>					
Rural	216	38.16	24.79	17.00	20.05
Urban	35	40.52	13.51	25.23	20.72
<b>Type of disease</b>					
PB	75	35.74	22.02	22.39	19.86
MB	176	39.86	23.91	15.94	20.29

for medical consultation within 6 months time, quite higher than 45% (Umadevi, 1992). It shows that the programme has improved with the passage of time.

In contrast to present study, Kumar et al (1983) found that time lag before medical consultation was more in rural patients than the urban patients under NLEP. This is because rate of registration was more in rural area (36.4%) than urban area (14.3%).

Table 4 shows that majority of the patients (61.8%) started MDT within six months of noticing the symptoms of leprosy. More than one fifth (20.7%) patients of leprosy took more than 12 months time to start MDT. There was significantly more number of females (34.6%) than males (17.5%), who went for MDT after one year.

Robertson et al (2000) concluded that 50% of the study cohort delayed presentation for more than 18 months from time of first symptom (mean 37.6 months), that is quite higher than the present study (20.7% patient wasting more than 12 months time to start MDT). This difference could be due to non-inclusion of the patient noticing the first symptom of leprosy more than

24 months back. They further commented that the most significant single factor causing delay in presentation and start of conventional treatment was ignorance of the disease.

### Conclusion

Awareness should be increased in public further that MDT is the only effective treatment of leprosy. This message is though incorporated in the present programme have been ineffective in achieving the desired result and they are opting for alternative system of treatment other than MDT. This is causing a considerable delay in opting for MDT. Measures should be taken to prevent delay in starting MDT and to prevent disability.

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