ABSTRACT

Tuberculosis (TB) has been declared a global health emergency by the World Health Organization (WHO), which promotes DOTS as an effective strategy for improving treatment outcomes for tuberculosis. The most cost-effective way of stopping the spread of tuberculosis is by curing it. Community–based DOTS would be considered as the one of the leading effective strategies to manage the increasing number of tuberculosis patients.

This is a prospective, analytical intervention study carried out at the Colombo Chest Clinic with, New, sputum positive, pulmonary tuberculosis patients. The study was conducted over a period of one year commencing from May 2003.

The standard Institutional-based Directly Observed Treatment (DOT) strategy was compared with a directly observed home-based strategy with a family

member serving as the DOT supervisor using a randomly selected sample of 217 patients in each group.

The two groups were similar in respect of socio-demographic variables and on their knowledge of TB and its treatment and also the reluctance to divulge their TB status due to the attached stigma and fear of discrimination. However significant difference was observed in their habits of smoking, consumption of alcohol and narcotic drug abuse.

The majority (98.6%) of patients attending the Colombo Chest Clinic were residents of Colombo District. Of them, 50.7% were from Colombo Municipal Council limits and the rest were from outside the city limits. The majority resided within a radius of 5 km from the clinic. Out of the total, helpers were needed for 42.2% of the patients to visit clinic and found significance difference between the two groups.

At the end of the second month, 88.5% had sputum converted to negative status and of them, home-based group had better conversion (91.3%) compared to the institutional-based (82%). There was significant difference ($\chi^2 = 8.18$,

p=0.017) between them. Treatment failures were less (0.5%) in the home-based group than (0.8%) in the institutional-based group. The cure rate of the home-based group increased to 95.9% (Z= 4.51, p=0.001) compared to 82.9% in the institutional-based group. The defaulter rate in the home-based group was lower (2.8%) in contrast to the (15.2%) institutional-based group. Majority of default occurred after the third month (86.4%) of treatment and one fourth of the defaulters stated that there was no need of further treatment as they got better with treatment. It was found that the risk was four times that of a narcotic drug user than non-narcotic drug user and the risk was twice in alcoholic than non-alcoholic for defaulting TB treatment.

Better treatment compliance was seen in the home-based group indicated by urine test for rifampicin done at the initial (Z=2.08, p=0.04) and continuation (Z=9.3, p=0.00) phases of TB treatment.

This study demonstrated that a home-based Directly Observed Treatment strategy supervised by a family member proved to be better in improving compliance than the current health worker administered DOTS. The majority of treatment supervisors were either spouses of the patients (44.7%), or their mothers (20.7%).

As this study was conducted on patients in the Colombo District further studies may be required to determine its application in other districts of Sri Lanka.