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EFFICACY OF UNIFORM MULTI-DRUG THERAPY (U-MDT) FOR LEPROSY: PRELIMINARY EVIDENCE FROM WHO / TDR INTERNATIONAL OPEN TRIAL

S. M. Mehendale [1,*], M. D. Gupte [2], P. Manickam [1], R. Prabu [1], P. Jayasree [1], K. Kanagasabai [1], K. Katoch [3], K. Ramalingam [4], S. Jianping [5], M. Shivakumar [6], V. Jadhav [7] on behalf of U-MDT study team

[1]National Institute of Epidemiology, Chennai, [2]Indian Council of Medical Research, New Delhi, [3]Former Director, National JALMA Institute for Leprosy & Other Mycobacterial Diseases, Agra, [4]Joint Director of Health Services, Tiruvannamalai, India, [5]Department of Leprosy Control, Institute of Dermatology, CAMS, Nanjing, China, [6]Damien Foundation India Trust, Chennai, [7]U-MDT trial centre-Pune, Pune, India

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Would you like to be considered for the Young Scientist Award?: No

Introduction: Globally, leprosy treatment is currently offered through general health services. There is a need for a simplified treatment regimen that does not require skills to classify disease and shorten the duration of treatment. This will facilitate sustaining leprosy control activities through primary health care facilities. WHO-TDR supported multi-centric trial aimed at assessing efficacy of six-month multi-drug therapy (MDT) regimen currently recommended for multi-bacillary (MB) patients as uniform MDT (U-MDT) for all types of leprosy patients (Clinical Trials Registry of India: 2012/05/002696). The primary objective is to assess whether U-MDT results in maintaining a maximum acceptable cumulative level of 5% relapse rate at the end of 5 years. We present results of interim analysis at completion of five years of the study.

Methods: The open design trial requiring 2500 newly detected, previously untreated patients each in multi-bacillary (MB) and pauci-bacillary (PB) groups is being conducted in six sites in India (Tiruvannamalai, Villupuram, Pune, Agra, Gaya and Rohtas) and two sites in China (Guizhou and Yunnan). In the annual follow-up of enrolled patients, clinical improvement (inactive, improved or static) is recorded based on standardized clinical criteria. An individual, who after completion of treatment develops one or more new skin patches consistent with leprosy, without evidence of reactions, is considered to have relapsed. The rationale, design and preliminary results had already been published (Axel et al, 2008). We calculated relapse rate per 100 person-years (PY). We compared the proportion with inactive lesions in PB and MB groups by Chi-square test. The person year relapse rates were compared by using mid-p exact test. The study is scheduled to be completed by 2014.

Results: The study enrolled 3396 patients during 2003-2008. Of these, 38% were MB and 4% had grade 2disability. Of the 3096 who completed treatment, skin lesions were inactive in 42% of PB (n=791) and in 10% of MB (n=122) patients (c^2=352; p<0.001). At the end of five years of follow-up, lesions were inactive in 89% in PB patients and 77% in the MB group (c^2=61;p<0.001). Totally 1031 adverse events were reported and 50% were reported from MB group. They included 16% migrations and 7% deaths were reported in the MB group. In the PB group, migrations were 26% and deaths 4.4 In the MB group, 13% and 15% developed new lesions and neuritis respectively and 18% had type I and 5% had type II reactions. In the PB group, the adverse events reported were 3.5% new lesions, 6.6% neuritis, 8% type I reaction, and 1.5% type II reaction. Six patients (MB=4, PB=2) had clinically confirmed relapse that occurred between the first and third year of follow-up. The relapse rate among MB patients was 0.076 per 100 PY and among PB patients was 0.023 per 100 PY (p=0.19).

Conclusion: The observed low relapse in the interim analysis indicates that U-MDT treatment is efficacious in improving the clinical status of skin lesions of both types of leprosy. We observed significant difference in the proportion of inactive lesions between the PB and MB group. However, high proportion of inactive lesions in MB documented the effectiveness of shortened duration of U-MDT regimen. Although final study results would emerge in 2014, the global and national programmes can start considering programmatic implications of the reported findings.