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Do retreatment tuberculosis patients need special treatment response follow-up beyond the standard regimen? A finding of five-year retrospective study in a pastoralist setting**Fentabil Getnet, Henok Seleshi, Wubareg Seifu and Abere Shiferaw Alemu**
Jigjiga University, Ethiopia

Background: Treatment outcomes serve as proxy measures of the quality of tuberculosis treatment. Hence, assessment of treatment outcomes is essential to evaluate the effectiveness of Directly Observed Therapy-Short course program in controlling the disease, and reducing treatment failure, death and default.

Objective: The objective of this study was to assess tuberculosis treatment outcomes and predictors of unsuccessful treatment outcome in Ethiopian Somali region, September 2009 to August 2014.

Methods: A retrospective review of five years data was conducted to evaluate the treatment outcomes of 1378 randomly selected tuberculosis patients treated in Kharamara, Dege-habour and Gode hospitals. We extracted data on socio-demographics, HIV Sero-status, tuberculosis type, treatment outcome and year using a prepared checklist. Tuberculosis treatment outcomes were categorized into successful (cured/completed) and unsuccessful (died/failed/default) according to the national tuberculosis guideline. Data was entered using EpiData 3.1 and analyzed using SPSS 20. Chi-square test (χ^2) and logistic regression model were used to reveal the predictors of unsuccessful treatment outcome at $P \leq 0.05$ significance level.

Result: Out of all, majorities were male (59.1%), pulmonary smear negative (49.2%) and new cases (90.6%), and HIV co-infection rate was 4.6%. The median age was 26 years. The overall treatment success rate was 86.8% [84.9%-88.5%], however, 4.8%, 7.6% and 0.7% of patients died, defaulted and failed to cure respectively. Treatment success rate fluctuated across the years and ranged from 76.9% to 94% [$p < 0.001$]. The odds of death/failure [AOR=2.4; 95% CI=1.4-3.9], and pulmonary smear positivity [AOR=2.3; 95% CI=1.6-3.5] were considerably higher among retreatment patients compared to new counterparts. Treatment success rate had no significant difference between age groups, genders, tuberculosis types and HIV status ($P > 0.05$).

Conclusion: This study revealed that the overall tuberculosis treatment success rate has realized the global target for 2011-2015. However, it does not guarantee its continuity as the trend showed that adverse treatment outcomes might unpredictably occur. Therefore, continual effort to effectively execute DOTS should be strengthened and special follow-up mechanism should be in place to monitor the treatment response of retreatment tuberculosis cases.

b.infen4ever@gmail.com