

Prevalence of Mycobacterium Tuberculosis Infection and Rifampicin Resistance among Presumptive Tuberculosis Cases Visiting Tuberculosis Clinic of Adare General Hospital, Southern Ethiopia

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Abstract : Introduction: Tuberculosis (TB) is a communicable chronic disease caused by Mycobacterium tuberculosis (MTB). About one-third of the world's population is latently infected with MTB. TB is among the top 10 causes of mortality throughout the globe from a single pathogen. Objective: The aim of this study was to determine the prevalence of tuberculosis, rifampicin-resistant/multidrug-resistant Mycobacterium tuberculosis, and associated factors among presumptive tuberculosis cases attending the tuberculosis clinic of Adare General Hospital located in Hawassa city. Methods: A hospital-based cross-sectional study was conducted among 321 tuberculosis suspected patients from April to July 2018. Socio-demographic, environmental, and behavioral data were collected using a structured questionnaire. Sputum specimens were analyzed using GeneXpert. Data entry was made using Epi info version 7 and analyzed by SPSS version 20. Logistic regression models were used to determine the risk factors. A p-value less than 0.05 was taken as a cut point. Results: In this study, the prevalence of Mycobacterium tuberculosis was 98 (30.5%) with 95% confidence interval (25.5-35.8), and the prevalence of rifampicin-resistant/multidrug-resistant Mycobacterium tuberculosis among the 98 Mycobacterium tuberculosis confirmed cases was 4 (4.1%). The prevalence of rifampicin-resistant/multidrug-resistant Mycobacterium tuberculosis among the tuberculosis suspected patients was 1.24%. Participants who had a history of treatment with anti-tuberculosis drugs were more likely to develop rifampicin-resistant/multidrug-resistant Mycobacterium tuberculosis. Conclusions: This study identified relatively high rifampicin-resistant/multidrug-resistant Mycobacterium tuberculosis among tuberculosis suspected patients in the study area. Early detection of drug-resistant Mycobacterium tuberculosis should be given enough attention to strengthen the management of tuberculosis cases and improve direct observation therapy short-course and eventually minimize the spread of rifampicin-resistant tuberculosis strain in the community.

Keywords : rifampicin resistance, mycobacterium tuberculosis, risk factors, prevalence of TB

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