

19th World Conference on  
Infectious Diseases, Prevention and Control  
December 10, 2024 | Webinar

## Magnitude, Drug Resistance Patterns of Tuberculosis and Associated Factors among Presumptive Extra Pulmonary Tuberculosis Patients in Selected Health Facilities, Addis Ababa, Ethiopia

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**Statement of the Problem:** Extra pulmonary tuberculosis accounts for a significant proportion of tuberculosis, a disease of public health concern. The complexity of the cases, the involvement of many organs, resource constraints and concerns regarding drug resistance, make disease diagnosis and treatment difficult. **Methodology & Theoretical Orientation:** A cross-sectional study was conducted from February-2022 to August-2022 in selected three public hospitals in Addis Ababa. Socio-demographic and clinical data were collected using a semi-structured questionnaire. The Gene XpertMTB/RIF assay, MGIT culture and solid culture using LJ medium were used. Isolates were tested for the phenotypic and genotypic DST patterns. Second line phenotypic and genotypic DST was done for MDR TB isolates. The data was entered and analyzed using, SPSS version 23, and a P-value  $\leq 0.05$  was considered as statistically significant. **Findings:** A total of 308 participants enrolled in this study. The magnitude of extra pulmonary tuberculosis using Gene XpertMTB/RIF assay, liquid culture and solid culture was 17.5% and 14.6% and 10.7% respectively. Out of 44 isolates

tested for first line drugs phenotypically, any drug resistance detected in 25% of the isolates. Two (4.5%) of the isolates were MDR TB. Out of 44 isolates tested using Geno Type MTBDRplus assay, 11.4% showed mutation at katG and 4.5% showed mutation in rpoB genes. In this study, sex, contact history with known TB cases and site of infection, having fever, having purulent type of aspirate and being HIV positive had statistically significant associations. **Conclusion & Significance:** The magnitude of tuberculosis in this study was relatively high. Both the phenotypic and genotypic drug susceptibility test results showed that high proportion of INH resistance. A higher mutation rate detected at katG gene.

### Biography

Elias Alehegn has his expertise in infectious disease diagnosis and treatment. As a veterinary undergraduate study and subsequent MSc in Medical Microbiology, he gained knowledge and skills in both veterinary and public health areas. He has experience in veterinary clinics, working with farmers, carrying out field studies and performing laboratory tests within the laboratory settings.