Outcomes and Factors associated with Multi-Drug Resistant Tuberculosis (MDR-TB) among Tuberculosis Patients attending Lira Regional Referral Hospital

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Background: Multi-Drug Resistant Tuberculosis (MDR-TB) remains a Public Health challenge in low resources countries. Uganda is still among the countries estimated by WHO to have incidences of MDR TB of at least 1000 cases. The burden of MDR-TB in Lango Sub-Region is high and yet its risk factors and treatment outcomes remain unknown. This study assessed treatment outcomes, factors associated with MDR-TB and MDR-TB patients' experiences with health system services among TB patients in Lira Regional Referral Hospital (LRRH) from January 2020 to December, 2022.

Methods: A cross sectional study involving quantitative and qualitative study was conducted among TB patients with treatment outcomes at LRRH from January 2020 to December 2022. Eligible participants were screened for MDR-TB and the independent variables which included; socio-demographics, clinical presentation, co-infections and morbidities. Descriptive statistics was used to determine treatment outcomes. Bivariate and multivariate analysis were done to determine predictors of MDR-TB. Key informant interviews for MDR-TB were done and analyzed manually to evaluate MDR-TB patients' experiences.

Results: Out of the 762 TB patients, 10.63% had MDR-TB. Higher proportions were males, 67.32% (513/762) and majority of the participants aged 30-45 years (38.58). among MDR patients, 38.27% (31/81) completed treatment, 30.86% (25/81) got cured, 18.52% (15/81) were lost to follow-up, and 12.35% (10/81) died. Distance of > 10km for LRRH (aOR=2.64, 95% CI: 1.45-5.17) and patients without previous tb treatment (aOR =0.03, 95% CI: 0.02-0.07) significantly predicted MDR-TB. Drugs' side effects, additional financial and nutritional support were also key findings in qualitative reports.

Conclusion: Higher proportions had favorable outcome. Distance of > 10km, previous TB treatment was associated with MDR-TB. drugs' side effects, financial and nutritional support could affect treatment adherence.

Keywords: *Treatment Outcomes, Multi Drug Resistant Tuberculosis, Predictors and Referral Hospital*