

An investigation of isoniazid mono-resistance tuberculosis in Tshwane district, Gauteng, in 2009

Endale Alemayehu

Ambo University, Ethiopia



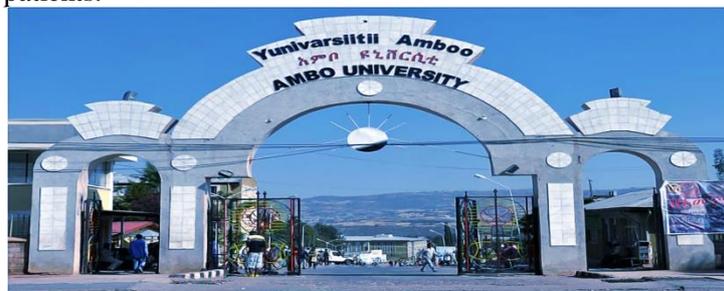
Abstract

Background: Tuberculosis (TB) is a global challenge and South Africa is one of the countries that are still battling with the management and control of this disease. To manage tuberculosis better, it is important to document the prevalence on INH monodrug resistant TB and determine treatment outcomes on these patients as compared to those who have drug susceptible tuberculosis (TB) and identify associated risk factors. **Study Aim:** The aim of the study was to determine the prevalence and investigate the associated factors of ionized mono-drug resistance tuberculosis in Tshwane district, Gauteng, in 2009. **Methods:** This is a descriptive retrospective records review study on Ionized (INH) mono-resistant TB patients in Tshwane in year 2009. During the first phase, a review of electronic registers including socio-demographic and other characteristics of patients that were on tuberculosis treatment in year 2009 within the Tshwane District and the whole National Health Laboratory Service (NHLS) Corporate data warehouse (CDW) database for 2009. During the second phase a matched case-control study was conducted based on the information from the CDW. Cases were patients with INH culture confirmed non-resistance TB who were matched by sex, name, date of birth and diagnosis date with controls, patients with drug susceptible TB. For comparison, data was converted into categorical variables and bi-variant analysis was done by running a two by two table of association. The Odds ratio (OR) and 95% confidence interval were calculated to

Determine the statistical significance. A p-value of ≤ 0.05 was considered significant. **Results:** Of the 349 study selected for the study, 55% of them were males and the manage was 36.6 years. Although most of the patients were newly diagnosed with tuberculosis (94%), few of them had a known HIV status (31%). Out of the total patients with known HIV status, sixteen percent (16%) of them were HIV negative, 34% had INH mono-resistant TB and HIV positive. A total 25% of patients sampled were under directly observed treatment (DOT) system.

Bivariate analysis showed that participating in DOT Support reduces the risk to developing resistant TB

Compared to those not participating (OR=0.50, 95% CI=0.30-0.83, p=0.01). Seventy-two (72%) of the patients had positive final outcomes with a total of 58.6% having sensitive TB and 93% were on treatment regimen 1. **Conclusion and recommendations:** The study has shown that the prevalence of INH mono-resistant TB patients is relatively high among patients studied with district 1 having more prevalence than other regions. Participating in DOT program greatly enhances positive treatment outcome and is highly recommended in managing INH Mr patients.



Biography

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