

META-ANALYSIS: ASSOCIATION BETWEEN ALCOHOL CONSUMPTION AND MULTIDRUG-RESISTANT TUBERCULOSIS AMONG PATIENTS TUBERCULOSIS

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ABSTRACT

Background: Multidrug-resistant tuberculosis (MDR-TB) is a major public health concern affecting approximately half a million people globally, but only 57% of cases of MDR-TB were successfully treated in 2019. This study aimed to estimate the association between alcohol consumption and MDR-TB.

Subjects and Method: This was a systematic review and meta-analysis study conducted to answer the research question with PICO as follows. Population: Tuberculosis patients. Intervention: Alcohol consumption. Comparison: Not alcohol consumption. Outcome: MDR-TB incidence. The articles came from 4 databases: ScienceDirect, PubMed, Google scholar and ProQuest. The article keywords are risk factor AND ("Multi-drug resistant Tuberculosis" or "MDR TB") and alcohol. Full papers from observational study published between 2012 and 2020 were included in this study. The measure of effect was Adjusted Odds Ratio (aOR).

Results: This meta-analysis reviewed a total of 9 observational studies, consisting of 6 case-control and 3 cross-sectional studies. The total sample size was 15,780 subjects from 3 continentals (America, Africa and Asia). TB patients with alcohol consumption was associated with 1.64 times increased risk of MDR-TB than without alcohol consumption, and it was statistically significant (aOR = 1.64; 95% CI = 1.40 to 1.91; $p < 0.001$).

Conclusion: MDR-TB is associated with alcohol consumption.

Keywords: Multidrug Resistant Tuberculosis, MDR-TB, Alcohol Consumption

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