

ABSTRACT

Background

Tuberculosis (TB) is an infectious disease that affects many Indonesians. The treatment for TB involves regularly taking several anti-TB drugs for several months. These drugs, specifically the regimen known as RHZE, have been known to cause drug-induced liver injury (DILI). DILI can be detected by the elevation of liver transaminases in the serum.

Objective

To determine the incidence and severity of increases in liver transaminase levels in Indonesian tuberculosis patients after two months of RHZE anti-TB treatment.

Method

A case cohort study where elevation of liver transaminases ALT and AST were measured after exposure to anti-TB drug therapy. 262 new TB patients, were selected from populations in Lampung and Yogyakarta as subjects.

Result

2.18% of the subjects developed DILI according to ATS criteria. 15% of the subjects developed a higher grade of liver transaminase elevation after two months of RHZE treatment. Associations were found between transaminase elevation and cigarette smoking and the female sex.

Conclusion

Anti-TB RHZE therapy causes considerable transaminase elevation in Indonesian patients.

Keywords

Indonesia, Yogyakarta, Lampung, liver enzymes, transaminase elevation, AST, ALT, DILI, TBILI hepatotoxicity, tuberculosis, first-line anti-TB, RHZE, isoniazid, rifampicin, TB, liver transaminase, aminotransferase, pulmonary tuberculosis.