



Low Rate Of Antituberculosis Drug-Induced Hepatotoxicity In Tanzanian Hospitalized Pulmonary Tuberculosis



patients.

*Hadija Semvua, Alma Tostmann, Jossy van den
Boogaard, , Riziki Kisonga, Gibson S. Kibiki , Rob E.
Aarnoutse , Martin J. Boeree*

Kilimanjaro Christian Medical Centre (KCMC), Kibong'oto National Tuberculosis Hospital (KNTH), Tanzania, Radboud University Nijmegen Medical Centre, the Netherlands.



Objective



Hepatotoxicity is the most serious adverse effect of tuberculosis (TB) treatment.

Data on the occurrence of TB-treatment related hepatotoxicity in Sub-Saharan Africa is limited.

We conducted a study in Tanzanian hospitalized TB patients and monitored their liver function closely.



Methods (1)



- The liver function was monitored during the intensive phase of TB treatment. Alanine aminotransferase (ALT), aspartate aminotransferase (AST) and total bilirubine were determined at baseline and after 2, 4, 6 and 8 weeks of treatment.
- Patients were treated according to the guidelines of the Tanzanian Tuberculosis Program.



Methods (2)



- Liver toxicity was defined as ALT more than five times the upper limit of normal without symptoms of toxicity (jaundice, abdominal pain, nausea, vomiting) or >3 times the ULN with symptoms.



Results



- The maximal ALAT value was 87 U/L and the maximum ASAT was 98 U/L.
- This is not more than two times the upper limit normal (ULN).
- One patient experienced liver toxicity symptoms but did not have increased liver function parameters.
- Ten patients had increased bilirubine levels.
- This was related to hepatitis B (risk ratio 5.7; 95% CI 1.7-18.6).



Discussion & Conclusions



- None of the patients developed hepatotoxicity according to international definitions.
- Only one case of liver toxicity was observed in the study, since the patient experienced symptoms of liver injury in relation to the TB drugs intake.
- This concludes a low rate of hepatotoxicity in African patients.



Future perspectives



- Low incidence of TB-drug related hepatotoxicity paves the way for future drug trials with higher doses of rifampicin to shorten treatment duration
- Polymorphisms in the liver enzyme genes may be different in African patients hence more studies are warranted.
- To the health centre: important to give patients clear instructions on signs and symptoms of liver toxicity.