

Joint Event

4th Pharmaceutical Chemistry Conference

12th World congress on

Future Pharma

June 27-28, 2019 | Amsterdam, Netherlands

Sarvesh SinghKing George's Medical University
India

Co-Author

**Divya Yadav, Anil Kumar Saksena,
Rahul Kumar, Preeti Mishra and
Tanushree Kumar**

King George's Medical University, India

Association of *NAT2* gene polymorphism with anti-tubercular drug induced hepatotoxicity in North Indian population

Background: Tuberculosis (TB) is one of the important causes of global mortality and morbidity. Hepatotoxicity is a most serious adverse drug reaction of anti-TB drugs. Various genetic factors are associated with drug-induced hepatotoxicity (DIH). Anti-tubercular drugs are mostly metabolized by N-acetyltransferase 2 (*NAT2*). Therefore, in this study we aim to assess the association between of *NAT2* genotype polymorphism and drug-induced hepatotoxicity (DIH) in North India population.

Methods: TB patients were recruited in two groups. Seventy (70) TB patients were enrolled as tolerant control group who did not develop DIH, whereas 30 TB patients in anti-tubercular DIH group who developed liver injury during treatment. The genetic polymorphisms of the *NAT2* genes were analysed by PCR-RFLP. Genotype and allele frequencies were evaluated by t-test and odds ratio (OR) with 95% confidence intervals (CIs) to evaluate the strength of associations.

Results: There is high percentage of slow acetylators among North Indian population. The 4% people were fast acetylators, 34% were intermediate acetylators and 62% were slow acetylators. Patients with the slow acetylator genotypes were most common and there was no significant difference between DIH (73.33%) and non-DIH (61.40%) patients. However, the slow-acetylator genotypes (*NAT2**6/7, *NAT2**5/7 and *NAT2**5/6) were also not significantly different in anti-tubercular DIH group and tolerant control group.

Conclusion: In present study, *NAT2* genotype polymorphism was found to have no association with development of anti-tubercular DIH

Biography

Sarvesh Singh has completed his MBBS from LLRM Medical College, Meerut, India and MD from King George's Medical University, Lucknow, India. He is an Associate Professor in Pharmacology, Department at King George's Medical University, Lucknow, India. He has published more than 12 papers in reputed journals.

drsarveshsingh@gmail.com