

Title: Influence of MTHFR C677T variant on high-dose Methotrexate-related toxicity in Tunisian acute lymphoblastic leukemia patients

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Introduction: High-dose methotrexate (HD-MTX) is widely used in the acute lymphoblastic leukemia (ALL). The effect of 5, 10-methylenetetrahydrofolate reductase (MTHFR) variants; mainly the C677T on the risk of MTX-induced toxicity was largely investigated and enrolled in meta-analysis [1]. However, the results were inconsistent.
The aim of this study was to investigate the relationship between the C677T variant of the MTHFR gene, and the MTX-induced toxicity in Tunisian ALL patients.
Materials and Methods: It was a retrospective study among 35 patients with ALL. Toxicity data was recorded after high-dose methotrexate (HD-MTX) course. Genotyping of MTHFR C677T was performed by polymerase chain reaction-restriction fragment length polymorphism (PCR-RFLP)[2].
Results: Patients with ALL carrying the C677T variant were at a higher risk of developing hepatotoxicity (RR=1.3 times).
Conclusion: The present result highlights the impact of MTHFR C677T variant on the MTX toxicity-induced in ALL and further studies with larger numbers of participants worldwide are required before definitive conclusions.

Biography

Rim Frikha is an associte professor in Medicine and a phD student at national school of engineer in the university of sfax.She is expert in histology-embryology and molecular genetic fon onco-hematology. She has published numerous papers in reputed journals in these field.

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Session name:biomarkers in blood cancer
Category: Poster presentation