

High Rate of Transfusion-transmitted Virus (TTV) Infection in the Patients with Leukemia

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Background & Objectives: Extrahepatic disorders of TT virus infection may have role in introducing and complicating the clinical outcomes in patients with leukemia. Therefore, in this study, the prevalence of TT virus infection was evaluated in the patients with leukemia.

Methods: In a cross sectional study, EDTA-treated blood samples were collected from 66 patients who clinically, pathologically, and laboratory confirmed with hematological malignancies. Then the plasma and Buffy coats were extracted from collected blood samples and stored in -70°C till protocols preformed. The DNA of TT virus was diagnosed in samples of studied patients by an in-house semi-nested PCR protocol. Also some possible risk factors of leukemia and TT viral infection including: age, gender, marriage, education, occupation, and also history of smoking and transfusion were statistically analyzed for all studied patients with leukemia.

Results: The genome of TT virus has been detected in 42% of plasma samples of patients with leukemia. Also the TT virus DNA has been detected in 64.1% of Buffy coats of patients with leukemia. On the other hand the HBsAg and HCVAb were found in 24% and 2% of plasma samples of the patients with leukemia, respectively.

Conclusion: Diagnosis of the high rate of TT virus infection in both plasma and especially buffy coat samples of the patients with leukemia re-emphasis on the importance role of TT virus pathogenesis in complication of the outcomes of hematological malignancies.

Keywords: Transfusion-transmitted Virus (TTV); Infection; Leukemia