Multi-drug transporter *MDR1* gene polymorphism and prognosis in adult acute lymphoblastic leukemia

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Abstract:
P-glycoprotein (P-gp), a membrane transporter encoded by *MDR1* gene, influences pharmacokinetics of anti-cancer drugs and contributes to multi-drug resistance phenotype in adult acute lymphoblastic leukemia (ALL). In this study, we explored prognostic and functional role of single nucleotide polymorphism C3435T in *MDR1* gene in 44 adult Caucasian patients with ALL. We found that the outcome of chemotherapy as well as *MDR1* gene expression, P-gp expression and P-gp activity in isolated ALL blast cells were comparable among the patients carrying different *MDR1* genotypes. Our results suggest that C3435T polymorphism in *MDR1* gene is not a major prognosticator in adult ALL.

Key words:
acute lymphoblastic leukemia, *MDR1*, *ABCB1*, P-glycoprotein, polymorphism