Association of C3435T, C1236T and C4125A polymorphisms of MDR-1 gene in Egyptian children with acute lymphoblastic leukaemia

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Abstract:

Background: P-glycoprotein (P-gp), a membrane transporter encoded by multidrug resistance-1 (MDR1) gene, influence pharmacokinetics and metabolism of anticancer drugs that contributes to multidrug resistance phenotype in acute lymphoblastic leukemia (ALL). The genetic variation of MDR1 in ALL patients is increasingly recognized in influencing the response to the treatment. Aim: In this study, we investigate the possible role of MDR-1 (C3435T, C1236T and C4125A) gene polymorphism as risk factor for the development of ALL in Egyptian children and clinical outcome of the disease. Materials and Methods: Genotyping of MDR-1 (C3435T, C1236T and C4125A) single nucleotide polymorphisms (SNPs) were done using a polymerase chain reaction/restriction fragment length polymorphism (RFLP-PCR) assay for 120 childhood ALL patients and 100 healthy controls.

Keywords:

ALL, MDR-1, polymorphism, Egyptian

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