

C3435T POLYMORPHISM OF MDR1 GENE EFFECT OF SURVIVAL ON NON-SMALL CELL LUNG CANCER



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Purpose: MDR1 gene which codes P-glycoprotein (PGP) is important factor chemotherapy resistance. The expression of P-glycoprotein (PGP) is higher TT genotype with patient than CC genotype with patient. In additionally TT genotype with patient has good progression chemotherapy treatment. We have evaluated whether the genotypic and allelic polymorphism has the effect of survival on MDR1 gene codon 3435.

Material and Method: DNA was isolated 79 patient with Non-small cell lung cancer which treatment chemotherapy by qiagen EZ1 kit. C3435T polymorphism was evaluated pyrosequencing and qRT-PCR.

Results: The average age was 59.8 ± 7.8 years, 68.7% of patients are male, 31.2% are female. Genotype frequency of CC, CT and TT is detected as 35.4%, 51.6% and 12.9%, and allele frequency of T and C as 44.5% and 55.5%, respectively. All patients have been followed up for 2 years. The elapsed period until progression was calculated as 21 ± 8.7 months in CC genotype, 13 ± 1.6 months in CT genotype and 12 ± 3.5 months in TT genotype but no significant difference was found between them. General survival period was 28.9 ± 4.7 months and these value 52.5 ± 12.4 months for CC genotype, 20.5 ± 2.7 months for CT and TT genotype and Statistically significant ($p=0.004$).

Conclusion: Our results indicate that CC genotype was less progression and related with general survival. The results from our patient group correlate with the literature.