

The Genetic Polymorphism of CYP2E1 in a Korean Healthy Subjects and Hepatocellular Carcinoma Patients

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The cytochrome P4502E1(CYP2E1) catalyzes oxidation of a number of clinically used drugs and activates various procarcinogens. Specific CYP2E1 genotype may modulate an even high risk for hepatocellular carcinoma. The CYP2E1 gene revealed functional activity of the expressed protein. In the present study, we genotyped 146 unrelated healthy Koreans(54 females, aged 19-41yr) and 51 hepatocellular carcinoma patients for CYP2E1 Rsa I polymorphism. Detection of the CYP2E1 alleles was performed by polymerase chain reaction and restriction fragment length analysis. The genomic DNA was isolated from peripheral blood with conventional phenol : chloroform extraction method. The allelic frequencies of the c1 and c2 in healthy volunteers were 0.85 and 0.15, respectively. The allelic frequencies of c1 and c2 in hepatocellular carcinoma patients were 0.76 and 0.25, respectively. The rare type (c2/c2) of CYP2E1 Rsa I polymorphism was 0.007 and 0.034 in healthy volunteers and hepatocellular carcinoma patients, respectively. These results suggest that rare type (c2/c2) of the CYP2E1 would be associated with susceptibility to hepatocellular carcinoma in Koreans.