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Association of asthma with β 2-adrenergic receptor gene, Epoxide Hydrolase gene and CD14 gene polymorphism in Korean population

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In order to investigate the association of genetic factor with asthma and contribution of the genetic interactions to the incidence of asthma in Korean population, the genetic polymorphisms of Epoxide Hydrolase(EH), CD14 and β 2-adrenergic receptor genes(β 2AR) among 33 asthma patients and 66 controls were examined.

The presence of the variant types of CD 14 slightly increased a risk of asthma compared to wild type, but this difference was not statistically significant. There was no association of asthma risk with EH and β 2AR 16 gene. The presence of the variant types of β 2AR 27 reduce a risk of asthma(O.R.=0.16, 95% CI: 0.03-0.76) compared to wild genotype. There was no significant association of asthma risk with any combination of genotypes.

Our result suggested a β 2AR 27 variant genotype can be used as a marker of susceptibility to asthma.

Keyword : Asthma, polymorphism, Epoxide Hydrolase, β 2-adrenergic receptor, CD14