HLA-DRB1*15:01 allele frequency and amoxicillin-clavulanate -related DILI in healthy Thai population

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Amoxicillin Clavulanate (AC) is widely use for the treatment of bacterial infection in many countries. However, AC-related drug induced liver injury (DILI) is the most frequent case in Europeans. Previous study, we found a significant association between *HLA-DRB1*15:01* allele and amoxicillin-clavulanate-induced liver injury with p-value = 0.002 and odd ratio (95% CI) = 2.59 (1.44-4.68) in Europeans. Interestingly, the distribution of *HLA-DRB1*15:01* allele associated with AC- related DILI were explored in healthy Thais. The aim of this study was to investigate the involvement between of *HLA-DRB1*15:01* allele frequency and AC-related DILI in healthy Thai population.Two-hundred general healthy Thai population were enrolled. *HLA* class II alleles were genotyped using polymerase chain reaction sequence specific oligonucleotides (PCR-SSOs). *HLA-DRB1*12:02* was the most common allele found across five regions of Thailand. The frequency distributions of *HLA-DRB1* alleles were *HLA-DRB1*12:02* (15.75%), *HLA-DRB1*15:02* (14.75%), *HLA-DRB1*09:01* (11.50%), *HLA-DRB1*07:01* (9.50%), *HLA-DRB1*15:01* (5.70%), *HLA-DRB1*03:01* (5.70%), *HLA-DRB1*14:01* (5.50%), *HLADRB1*16:02* (4.50%), *HLA-DRB1*04:05* (4.00%) and *HLA-DRB1*04:03* (3.00%). Particularly, *HLA-DRB1*15:01* allele was similarly distributed in Northern (7.00%), North East (4.00%), South (7.00%) and Central (5.00%). The distribution of specific *HLA-DRB1*15:01* alleles will support the development of the pharmacogenetics markers for screening DILI in Thailand.

Key words : Amoxicillin Clavulanate, *HLA-DRB1*15:01* allele, DILI , Thai population

Biography

My name is Nicha Soponpongpipat. I had completed grade 12 at Mahidol International Demonstration School, Thailand. I'm interest in studying about medicine which has led to the pharmacogenetics research. This pharmacogenetics researcher has provided an inspiration and experience for entering the faculty of medicine in the future.

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