Distribution of *HLA-B*58:01* association with Allopurinol-induced SCARs in Thai population

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Allopurinol is the most commonly used for treatment in patients with gouty arthritis, hyperuricemia and cancer patients undergoing chemotherapy. However, allopurinol is a major cause of severe cutaneous adverse reactions (SCARs) in Europeans, Asians, and Thais. We found that the *HLA-B*58:01* is associated with allopurinol-induced SCARs including Stevens-Johnson syndrome (SJS), toxic epidermal necrolysis (TEN), and drug reaction with eosinophilia and systemic symptoms (DRESS) in many populations. Furthermore, the frequency of *HLA-B*58:01* allele has interested for the screening among different ethnicities before initiation of treatment. To study the frequency of *HLA-B*58:01* with Allopurinol-induced SCARs in Thai population. 200 general Thai population who had no history of drug-induced SCARs were included in this study. *HLA-B* alleles were genotyped using polymerase chain reaction-sequence-specific oligonucleotides (PCR-SSOs). Among all 200 subjects in Thais, the top five of *HLA-B* alleles consisted of *HLA-B*46:01* (16.00%), *HLA-B*40:01* (8.00%), *HLA-B*15:02* (7.25%), *HLA-B*13:01* (6.50%), and *HLA-B*58:01* (6.25%). Moreover, *HLA-B*58:01* allele was the highest allele in the Asian population approximately 7.38%. On the contrary, we found this allele approximately 1.13% of Caucasians, 1.07% of Hispanics, and 0.80% of North American. Interestingly, *HLA-B*58:01* was the main allele in Thailand and there was found more common in African Americans (6.37%). Our pharmacogenomics database could be used as a screening test for other populations before treatment with allopurinol.

KEYWORDS: *HLA-B*58:01*, Allopurinol, Thai population, severe cutaneous adverse reactions

Biography

Subunya Jaroenjiengchai is a student of Bodindecha (Sing Singhaseni) school. I am interested in medical field and want to study medicne in Thai university. This research will be a the part of my portfolio which is a visual representation of my activities and experiences.

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