HLA-Cw6 Allele Expression is Associated with Good Narrowband Ultraviolet B Response in Javanese-Indonesian Psoriasis Subjects

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| Abstract | BACKGROUND: Psoriasis is an autoimmune disease involving genetic-environmental factors. Human Leukocyte Antigen (HLA)-Cw6 allele is the main genetic risk factor of psoriasis, but its prevalence varies widely. HLA-Cw6 allele correlates with psoriasis clinical type and treatment responses. Narrowband ultraviolet B (NB-UVB) and methotrexate (MTX) are effective psoriasis treatments but their association with HLA-Cw6 allele has not been identified. The study aims to determine the association between HLA-Cw6 allele expression, NB-UVB, and MTX treatment responses in Javanese-Indonesian psoriasis subjects were recruited in this study, 45 subjects were treated using NB UVB, while the other 45 subjects were treated using MTX, respectively, for 12 weeks. The psoriasis diagnosis and treatment responses were evaluated by dermatologists using Psoriasis Area Severity Index (PASI) score. The HLA-Cw6 allele was examined using the single-specific-primer polymerase chain reaction method. Fisher's Exact and Chi-square tests were employed, where p-value<0.05 was considered of significant association.RESULTS: The HLA-Cw6 allele positivity was identified in 23 psoriasis subjects (25.56%), while the other 67 subjects expressed HLA-Cw6 allele negative (74.44%). Female with HLA-Cw6 allele positivity who did not have comorbid disease show good response to NB-UVB than MTX. Meanwhile, subjects who were treated with MTX showed no association between therapeutic response and HLA-Cw6. HLA-Cw6 status was not correlated with the onset of psoriasis, family history, and comorbid diseases in all subjects.CONCLUSION: HLA-Cw6 allele expression is more associated with good NB-UVB treatment response than with MTX treatment response in female Javanese-Indonesian psoriasis subjects without comorbid disease.KEYWORDS: HLA-Cw6, narrowband ultraviolet B, methotrexate, Javanese, psoriasisÃfÂ,Ã,Â |
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