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Gene expression of *PTPN-22* in Iranian patients with alopecia areata

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Objective: In present study, effect of *PTPN22* gene expression was investigated in Iranian AA patients and their respective controls.

Background: Alopecia areata (AA) is an autoimmune multifactorial disease characterized by hair loss especially from the scalp affecting approximately 5.3 million people. The gene encoding the protein tyrosine phosphatase, non-receptor type 22 (*PTPN22*), which is exclusively expressed in immune cells, has been considered as a risk factor associated with the pathogenesis of AA.

Methods: The study group consisted of 30 patients with AA (13 female and 17 male, mean age 26.3±12.5) and 15 (5 female and 10 male, mean age 30±5.88) healthy controls. RNA was extracted from blood sample. Thereafter, cDNA was synthesized after RNA isolation. *PTPN22* expression levels were measured by real-time PCR. Furthermore, association of this *PTPN22* with some baseline clinical and demographical features was assessed.

Results: *PTPN22* expression levels of patients with AA were significantly higher (4.6±3.8) than those in controls (1.14±0.56) (p value=0.01). *PTPN22* expression was only associated with the sex of the AA patients.

Conclusion: In the present study, a significant association was found between *PTPN22* gene expression and susceptibility to alopecia areata.

Biography

Reyhaneh Abgoon has received her Master's degree in Cellular and Molecular Biology from Azad University. Her research interests include immunology, molecular immunology, especially autoimmune diseases. She is working as a supervisor in Banej Elixir molecular research institute in Tehran. She has presented several research abstracts about alopecia areata which is an autoimmune disease at various international conferences.

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