Peripheral blood toll-like receptor 4 correlates response to candida immunotherapy of warts.

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Abstract
Human papilloma virus infection may be self-limiting; however, some cases may spread. There are no factors predicting the prognosis of such infections. The present study aimed to evaluate the significance of TLR4 expression in predicting the response of warts to candida immunotherapy. A total of 60 patients with different types of warts were included in the present study. A total volume of 2 ml venous blood was collected and real-time polymerase chain reaction was used to determine expression of TLR4. Patients were subjected to intralesional injection of Candida antigen into the largest wart at 2-week intervals until complete clearance or for a maximum of six sessions. Of the total 58 patients available for analysis of study results, 44 patients (75.9%) showed complete resolution with better response in younger ages. The TLR4 expression in patients with complete and partial response was significantly higher than that in patients who had no response (p = .006). Among our patients, 48.3% showed no side effects, 44.8% showed local reactions, and 6.9% showed systemic side effects. Only four patients showed recurrence after 6 months. Using receiver operating characteristic curve analysis, at cutoff of expression level >12 is accompanied by 100% specificity of TLR4 in predicting treatment response to candida immunotherapy. Candida immunotherapy is an effective warts treatment, especially in young patients. Higher PMBC TLR4 levels can predict response to candida immunotherapy.

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