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Utilization of the Psoriasis Epidemiology Screening Tool (PEST) in the Debrecen Psoriasis Patient Population

Psoriasis is a chronic inflammatory skin condition affecting millions worldwide. Beyond its cutaneous manifestations, it has often been associated with Psoriatic Arthritis (PsA), thus early detection of PsA is crucial. Psoriasis Epidemiology Screening Tool (PEST) is a simple test for dermatologists to identify psoriatic patients with possible joint involvement who may be referred to rheumatologists for diagnosing PsA.

The primary aim of this study was to assess the utility of PEST, identifying individuals with possible PsA. The secondary aim was to characterize, describe and compare the suspicious population. The tertiary aim was to determine how the use of PEST might change the management of this population.

A retrospective cohort study was conducted on patients diagnosed with psoriasis who visited the Department of Dermatology University of Debrecen between August to October in 2022. Electronic health records and PEST questionnaire responses were analyzed to identify individuals referable to rheumatologists. Two groups were identified based on the PEST score results: low-PEST and high-PEST patients. In case of categorial variables the two groups were compared by chi-square or Fisher exact test. The normality of data was investigated by Shapiro-Wilk test. The continuous variables were compared with Mann-Whitney test. Logistic regression was performed to investigate the influencing factors for high-PEST patients.

A total of 192 patients were randomly selected and participated in this study. Psoriatic patients were categorized as low-PEST (PEST score of 2 and below; n=167 patients) and high-PEST (score 3 or above; n=25) patients. Comparing the two groups, they showed no difference in their gender, age, disease onset and duration, treatment and body mass index, but the high-PEST group showed significantly higher ratio of patients with positive family history and psoriasis nail involvement. In logistic regression analysis, we found that patients with nail involvement have a 5.46-fold increase in the odds of achieving a high PEST score. Female gender is also associated with a 4.76-fold increase, and so is positive family history with a 3.15-fold increase. Examining the referral-ratio of high-PEST patients (n=25) to rheumatologists we found that half of the patients (n=12) were referred for further rheumatology exams, and only 10 of the 12 patients acted accordingly. Overall, more than half of those patients (6/10) received the diagnosis of PsA. The remaining patients (i.e., not referred) were further educated and annual PEST follow ups were done. Ultimately, the patients diagnosed with PsA were comanaged with the rheumatologist.

Positive family history, presence of nail matrix involvement and female gender variables have a statistically significant association with the outcome of higher PEST and eventually possible PsA diagnosis. PEST carries a high possibility of helping dermatologists to recognize and identify psoriatic individuals with a need for further rheumatological examinations.

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