

Investigation of the Prevalence, Phenotypes, and Risk Factors Associated with Demodex Infestation and Its Relationship with Acne

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Abstract : Demodex is a mandatory parasite of pilosebaceous. *D. folliculorum* lives as a single parasite or as a number of parasites in hair follicles, and *D. brevis* as a single parasite living in sebaceous glands. Transmission of Demodex from one person to another requires direct skin contact; it also has a greater density in the forehead, cheeks, nose, and nasolabial folds. Demodex can cause some clinical symptoms such as follicular pityriasis, rosacea-like demodicosis, postural folliculitis, papules, seborrheic dermatitis, blepharitis, dermatitis around the lips, and hyperpigmented spots. In this study, the prevalence of Demodex species in patients referred to the dermatology department of Sayad Shirazi Hospital Gorgan, Iran, in the years 2019-2020 was investigated. Material and Methods: The study population consisted of 242 samples taken from the people referred to the dermatology department of Sayad Shirazi Hospital during the years 2019-2020, which were sampled by adhesive tape. All of the participants completed the questionnaires. The samples were examined microscopically for the presence of Demodex. Results: Out of 242 participants, 67 (27.68%) were infected with Demodex. Most cases of infection were observed in the group of 21 to 30 years (28 people; 11.57%) and then in the group of 31 to 40 years (21 people; 8.67%). Also, in the group of people under 10 years and over 60 years, no positive cases (0%) of Demodex were observed in microscopic examinations. Out of 11 variables, there was a statistically significant difference in relation to the three variables of age ($P = 0.000003$), use of cleansing solutions ($P = 0.002$), and the presence of acne ($P = 0.0013$). Conclusion: According to the results of this study, it was found that the incidence of Demodex in one group of acne patients is higher than in others, which emphasizes the possible role of Demodex in the pathogenesis of acne. In this study, there was an inverse relationship between the incidence of Demodex and the use of skin cleansing solutions. Also, the prevalence of Demodex is higher in the group of 20-30 years, and its prevalence does not increase with age. Due to the possibility of drug resistance in the future, regular studies on genotyping and drug resistance are recommended.

Keywords : acne, demodex, mite, prevalence

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