

134. CUTANEOUS MICROBIOME IN ROSACEA

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Introduction. Rosacea, one of the most common dermatoses affecting predominantly adults between the ages of 30 and 60, is a chronic skin condition manifested by persistent Centro facial erythema, telangiectasia, papules, pustules and in advanced stages, fimes. It is divided into four subtypes - erythemothelangiectatic, papulopustular, phytomatous and ocular. The prevalence rates are controversial, estimating affecting up to 15% of certain populations. It is more common in women, but rhinophyma is observed exclusively in men. Due to its multifactorial nature, the relapses and characteristic remissions, the diagnosis is complex. Even if there is no definitive treatment, there are effective options that can be adapted to the symptoms and severity of the disease.

Aim of the study. This review of the literature has the purpose to highlight the skin microbiome and its involvement in the pathogenesis of patients with rosacea.

Materials and methods. To identify relevant articles, ScienceDirect, Wiley Online Library and NCBI databases were searched using the

Results. Although the concret pathogenesis of rosacea is unknown, it is assumed that this results from a combination of congenital immune system dysfunction, aberrant neurovascular signaling and dysbiosis of commensal microorganisms, all of which lead to the initiation of pro-inflammatory cascades. Considering the use of antibiotics in the treatment of rosacea, it is assumed that bacteria can be a causative factor. Studies have documented in patients with rosacea, the presence of higher concentrations of *Demodex folliculorum*, its role, however, is unclear and controversial. In humans, two species of *Demodex* are described, *folliculorum* (at the level of the follicular infundibulum) and *brevis* (at the level of the sebaceous glands), located especially on the face, scalp and upper thorax. *Bacillus oleronius* is also mentioned in patients with specific subtypes of rosacea, which stimulate a strong inflammatory response, through MMP-9, TNF α and IL-8.

Conclusions. Some microorganisms are mentioned as having a pathogenetic role in rosacea, but no direct correlation with the incidence of the pathology has been clearly defined. Although isolated *Demodex* do not appear to be the cause of rosacea, they may be an important cofactor, especially in papulopustular rosacea, by triggering a delayed hypersensitivity reaction, possibly to antigens of follicular origin, linked to *Demodex folliculorum*, stimulating the progression of the disease. Due to its deeper localization, *Demodex brevis* is more difficult to identify and that is why many studies mainly refer to *Demodex folliculorum*.

Key words: skin microbiome, rosacea, demodex.