

Diagnostic and therapeutic problems in the invasion of *Demodex* spp. – own observations

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Two mite species of the genus *Demodex* are found in humans: *D. folliculorum* and *D. brevis*. They mainly parasitize the skin of the face (abundant in sebaceous glands - nose, cheeks, forehead, chin). Within the eyelids, *D. folliculorum* occupies the Zeiss glands, and *D. brevis* the tarsal meibomian glands. It is assumed that the presence of more than five mites per cm² of skin leads to symptomatic parasitosis.

As the clinical presentation resembles rosacea or seborrheic dermatitis, diagnosis is difficult and leads to incorrect treatment. In ocular demodicosis, inflammatory conjunctivitis and blepharitis are the most common symptoms and are usually regarded as allergic reactions. It has been suggested that the presence of *Demodex* can be a factor predisposing to the development of basal cell carcinoma of the eyelids.

Inflammation observed in patients may be related not only to the mites, but also to the presence of bacteria associated with them. *Demodex* sp. can be a source of *Bacillus oleronius*, found inside these mites.

Biological material taken for identifying demodicosis are scrapings of skin lesions, sometimes from pustules and nodules; and eyelashes and eyebrows (in the case of changes within the eyelids). *Demodex* mites can be detected using various diagnostic methods, including direct preparations, preparations fixed with Hoyer reagent and a standardized skin surface biopsy (SSSB). Treatment of demodicosis usually takes several months. It should be emphasized that no scheme for treating demodicosis has been developed so far, although this problem concerns mainly ocular demodicosis because antiparasitic drugs are usually not available as preparations for use in ophthalmology.

It should be noted that misdiagnosis of the pathological changes caused by mites results in incorrect treatment, which masks the typical clinical presentation of demodicosis: This was confirmed by the diagnosis of six patients with unrecognized ocular demodicosis in 2015 in the Department of Diagnosis and Treatment of Parasitic Diseases and Mycoses. Misdiagnosis and consequent incorrect treatment result primarily from inadequate parasitological knowledge among ophthalmologists and dermatologists.