Abstract:

Human Demodex mites (Demodex folliculorum and Demodex brevis) hold a high rank in the evolutionary and phylogenetic hierarchy of the skin microbiome, although in most people their presence is of no consequence. While human demodicosis is a skin disease sui generis, it can mimic many other inflammatory dermatoses, such as folliculitis, rosacea and perioral dermatitis, leading to unspecific and confusing descriptions in the literature. Here, we propose to classify human demodicosis into a primary form and a secondary form, which is associated mainly with immunosuppression. The clinical manifestations of primary demodicosis may include (i) spinulate demodicosis, currently known as pityriasis folliculorum, involving sebaceous hair follicles without visible inflammation; (ii) papulopustular/nodulocystic or conglobate demodicosis with pronounced inflammation affecting most commonly the perioral and periorbital areas of the face; (iii) ocular demodicosis, inducing chronic blepharitis, chalazia or, less commonly, keratoconjunctivitis; and (iv) auricular demodicosis causing external otitis or myringitis. Secondary demodicosis is usually associated with systemic or local immunosuppression. Treatment is only weakly evidence based, and the most effective concentrations of acaricides remain to be determined. Optimization of an in vitro or ex vivo culture model is necessary for future studies. Endosymbiosis between certain bacteria and Demodex mites in the pathogenesis of demodicosis.
deserves more attention. Further clinical observations and experiments are needed to prove our hypothesis.