

Observations on the onset of human cutaneous pathologies correlated to the presence of *Demodex* mites.

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As it is known, the human skin can contain two species of mites of *Demodex* genus: *D.folliculorum* and *D.brevis*. The former is located inside hair follicle and the latter is located inside sebaceous glands. Here they feed and propagate themselves carrying out their pathogenic function and acting as a reservoir for various microorganisms (Spickett, S 1961, Leprosy Rev.,32: 263-268; English, FP et al, 1981, Australian J.of Ophthalmology, 9: 311-313; Wolf, R et al, 1988, Acta Dermato-Venereologica, 68: 535-537; Principato, M 1995, Giornale it. di Malattie Infettive, 1: 351- 354) . Their anatomic distribution varies in accordance with the host's sex and age and it can be related to different pathologies onset (Akbulatova, Lk 1963, Vest.Derm.Vener., 40: 57-61; Principato, M 1994, Bull.Soc Franç.Parasitol., 12: 81-91). In Italy mites of *Demodex* genus have been studied by various Authors, but a complex investigation related to their anatomic distribution and pathologies to them correlated has never been made (Orru, A et al 1972, Rassegna Medica Sarda, 75: 231; Varotti, C 1981, Giornale It. di Dermatol. e Ven., 116: 489-481; Principato M et al, 1994, Atti VIII Int. Congr. of Parasitol., 2: 259; Principato, M et al 1988, Ann.Ottalm.Clin. Oculist., 114: 577-581). It depends on the fact that these parasites do not often cause particularly marked lesions and it is not always possible to point them out with common diagnostic techniques. Precisely for this reason our investigation was not planned and the results obtained, herein reported, concern random episodes which got under our consideration in ten years of human demodicosis studies on dermatologists' and patients' reports.

The techniques of mite sampling were varied in relation to the anatomic site affected: for samples from the head and forehead a small steel spoon was used, for the nose and external auditory meatus - small wooden sticks, for trunk, arms or legs a particular hooked or perforated tipped instrument. As for other parts of the body, such as vulva or penis, the pustule or the comedone was squeezed directly upon a slide. Separation of the mites from sebaceous material occurred by their precipitation in xylene, and their isolation was obtained by means of microscopic flattened tipped needles and the further mounting was carried out with the use of Berlese solution.

The graphic reported beneath represents the percentage of frequency of various pathologies in which mites of *Demodex* genus were isolated. *D.brevis* always resulted to be the predominant species, with the exception of itching folliculitis, located in various parts of the body, in which the predominant species resulted to be *D.folliculorum*. In the most evident pathologic cases the mites always appeared in the phase of reproduction. There was not discovered relevant difference related to sex of hosts, but the percentage of *D.folliculorum* was always higher on young subjects. Besides, from our results it is deduced that *D.brevis* is the only species present when the pathology is extremely serious and treatments have already been carried out. When the acute phase is finished, the itching stops and this species falls in the state of quiescence without propagating itself.

