

INDOOR DUST CONTAMINATED BY BIOTIC AGENTS: STRATEGIES OF INTERVENTION

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The Indoor Dust Direct Examination (EDPA®) reveals both the presence of pests of economic interest, especially in the agri-food chain (1,2), and the presence of pests of medical interest in confined environments such as homes, offices, and so on (3,4). Following the detection of these pests, environmental measures are necessary that are not only related to the use of residual pyrethroids, knocking down or snatching, but also to the use of particular intervention strategies which may vary in relation to the parasite detected (5). In this note some special intervention modalities are reported that must be complied with to make an effective environmental disinfection action. The following pests were considered: *Pyemotes ventricosus*, *Glycyphagus domesticus*, *Ctenocephalides felis*, *Cheyletiella blakei*, *Tydeus molestus*. In 10 episodes come to our attention, we tried to recommend both the direct environmental treatment and the environmental treatment preceded by a targeted strategy in relation to the parasite, in order to verify which one was the most correct intervention modality to solve the infestation. In the case of *Pyemotes ventricosus* it was proved indispensable, before the environmental treatment, to carry out the physical removal of the woodworm-eaten furniture to which the biological cycle of the mite is related. In the case of *Glycyphagus domesticus*, a double intervention strategy was demonstrated indispensable before and after the environmental treatment with pyrethroids. In fact, it was essential to remove the parietal molds and to lower the rate of RH below 60% by a dehumidifier; in addition, after the biocidal treatment, clothes and linen had to be washed in plenty of water and the vacuum cleaner had to be used on mattresses and padding in order to remove the irritant bristles of this mite. In the case of *Ctenocephalides felis* and *Cheyletiella blakei*, in order to solve the infestation, it was essential to treat the cat, which is the source of environmental infestation; at the same time it was important to disinfect the environment by using a residual pyrethroid such as lambda cyhalothrin. Finally, as regards *Tydeus molestus*, it was necessary to remove the plants inside the dwelling and to put a biocidal barrier on the internal perimeter of the windows and French windows in order to prevent the spontaneous entry of this mite from outdoor. Only with such strategic measures of targeted intervention could the pest control totally and immediately be resolved and the remission of dermatological symptoms be obtained. Our experience shows therefore how the study of the environmental dust can lead to unveil the parasitic origin of a dermatitis, but also that the complete resolution of the infestation and of the dermopathy can be achieved only through the application of a targeted environmental intervention strategy.

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