Efficiency study of PawCare® on bacteria and yeast loads in canine Pododermatitis

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Abstract: The skin of dogs is colonized by various microorganisms, and decreasing the microbial load on the skin surface can prevent infection development; for this purpose, topical treatments should be preferred. Due to emerging resistance to antimicrobials, alternative strategies for decontamination of cutaneous surfaces would be desirable. Pawcare® is a compound based on natural guar, which mechanically removes dirt, debris, and microorganisms from surfaces and provides a mild disinfection. The aim of this study was to assess its efficacy in decreasing bacterial and yeast loads in dogs with erythematous Pododermatitis and greasy, malodorous pedal skin. Eighteen dogs with at least two affected paws were included. An acetate tape sample for semi quantitative evaluation of Malassezia yeasts numbers (range 0-4) on 10 OIF and a sample for bacterial culture for the identification and evaluation of colony forming units (CFU)/ml were collected from the ventral interdigital spaces before and after the application of Pawcare®. Statistical evaluation of pre- and post-treatment counts was performed with the Wilcoxon signed rank test. Eight dogs were positive for Malassezia (7.25+/-7.05) and counts decreased significantly (3.88+/-4.19) (p=0.0078). Twenty-one bacterial isolates of eleven different species were cultured before and after treatment from 17 dogs. In seven dogs with initial low (10^1 or 10^2) CFU/ml there was no bacterial growth after treatment, while in cases with higher CFU/ml (10^2-10^6) it decreased significantly by an average of 1.4 log counts (pre 3.24+/-1.76, post 1.86+/-1.62)(p=0.0004). Pawcare® was able to significantly decrease yeast and bacterial loads in dogs with Pododermatitis.

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Conflict of interest: None declared.

Protocol using PawCare to decrease bacterial loads on the interdigital skin of dogs

Some considerations on the included patients: all adults, weighing more than 20 kg and with a clinical history of pododermatitis due to orthopaedic diseases and/or atopic dermatitis. Dogs included in the study show erythema in the ventral aspect of the interdigital spaces, some of them presenting with caseous and malodorous material that needs to be removed daily by the owner.

A REMARKABLE appreciation was made by the owners about the pleasant scent of the product, detectable on the user's hand still some hours after application (the same on the treated paws) and about the "fresh" sensation that releases to the touch. All treated dogs, particularly those with marked pain when the lesional area was palpated, tolerated well the application of the product, even when the interdigital spaces were strongly handled to facilitate the removal of the exudate.

Evaluating the results, we noticed an IMPORTANT decrease in the number of Malassezia yeasts as much as in the bacterial population after the product's application, passing from 10^1 e 10^2 UFC/ml pre-application to absent bacterial growth post-application (cases 3,4,5) and a REMARKABLE reduction of UFC (cases 1,4,6,7).

Remark: due to the absence of uniformity between bacterial counts on acetate strip samples and bacterial growth on agar plates (cases 3,4) the latter is likely to be more recommended in the evaluation of the product's efficacy.

We consider the role of PAWCARE really important in what should be the daily management of a dog with pododermatitis. In subjects with severe involvement of the ventral interdigital spaces the use of Pawcare associated with constant cleaning and disinfection can really help the owner in the management of a disease, that often tends to become chronic and has a strong impact on the dog's and the owner's quality of life.

We give you our kindest regards and thank you for the collaboration and suggestions.

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