Effectiveness of a New Treatment for Atopic Dermatitis in Dogs

09/2014 - Animal Science. An estimated 10% of dogs suffer atopic dermatitis, a common type of allergy for which there are few treatments. One of them is the use of the immunosuppressant cyclosporine, which administered orally is very effective, but also causes side effects which increase with the duration of the treatment. A clinical trial has shown that topical administration, possible thanks to advances in nanotechnology, is effective in reducing the severity of injuries and does not cause adverse reactions.

Atopic dermatitis, the second most common form of allergic dermatitis in dogs, has risen in the past decades. In fact, it is now thought that about 10% of dogs suffer from this condition. Nonetheless, the treatment options available are limited. Although allergen-specific immunotherapy remains the treatment of first choice because it is the safest way to modulate the immune response, alternative treatments with immunosuppressive drugs, such as glucocorticoids or cyclosporine (CsA), are also available. The potent immunosuppressive activity of orally administered CsA is responsible for its efficacy but also for its toxic effects, related to the duration of treatment. Therefore, when a condition is chronic and CsA is used long-term, the potential risk increases.

Topical use of CsA has been hampered by its poor ability of absorption. Currently, nanotechnology has facilitated the development of a new pharmaceutical formulation able to penetrate through the epidermis to ensure absorption and dermal action of CsA.

The objective of this trial, conducted in multiple centres, was to evaluate blindly the efficacy of this new formulation of CsA in dogs with atopic dermatitis. Animals were randomly divided into two groups, one group treated with topical CsA and a control group treated with placebo. After 21, 30 and 45 days of topical CsA therapy all dogs showed an effective and significant reduction in pruritus and lesions severity. Conversely, the animals treated with placebo showed no significant improvement.

The results suggested that topical administration of CsA is effective in reducing the severity of skin lesions and pruritus in dogs with atopic dermatitis. Moreover, any of the animals treated with CsA experienced adverse events.

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