

Effect of a 0.0584% Hydrocortisone Aceponate Spray (Cortavance®) on Transepidermal Water Loss in Canine Atopic Dermatitis: A Preliminary Study

Euihwa Nam, Taeho Chung, Jihyun Kim, Seolhee Park, Hyoeun Kim, Hwa-young Youn, Junseok Chae and Cheolyong Hwang*

Department of Veterinary Internal Medicine, College of Veterinary Medicine, Seoul National University, Seoul, Korea

Purpose: The purpose of this study was to evaluate the efficacy of a topical spray containing 0.0584% hydrocortisone aceponate (HCA; Cortavance®; Virbac SA, Carros, France), featuring potent pharmacological activity with low risk-benefit ratios in canine atopic dermatitis (CAD).

Material and Methods: This study was conducted on dogs fulfilling the diagnostic criteria for atopic dermatitis. All dogs received the HCA spray once daily to the lesional areas. Clinical assessments were performed before the treatment period (day 0) and after follow-up period (day 14) to correlate clinical response with alternations in skin barrier function. Lesion scores and pruritus were determined by the canine atopic dermatitis extent and severity index (CADESI-03) and the visual analogue scale (VAS), respectively. Transepidermal water loss (TEWL), a marker of the inside-outside barrier, was determined in lesional skin by using of the VapoMeter (an unventilated closed chamber device).

Results: Clinical severity was significantly decreased in CADESI-03 (13 vs. 5.5, $P < 0.0001$) and pruritus scores (6.8 vs. 2.1, $P < 0.0001$) after 14 days of HCA spray treatment. The change of TEWL values in lesional skin (41.2 vs. 17.5 g/m²h, $P=0.0011$) was significantly reduced compared to baseline (day 0). No adverse effects were observed in any of the dogs during the trial period.

Conclusion: HCA spray demonstrated to be effective in inducing a significant clinical improvement of atopic dogs. HCA spray also showed significant improvement of cutaneous hydration and skin barrier function.

Key words: canine, atopic dermatitis, hydrocortisone aceponate, TEWL

*Corresponding author ; cyhwang@snu.ac.kr