

# LetiKerato Shampoo and Lotion efficacy as an adjunct treatment in canine leishmaniosis keratoseborrheic skin lesions

R Foj<sup>1\*</sup>, G Pol<sup>1</sup>, S Vivancos<sup>1</sup>, S Usero<sup>1</sup>, P Brazis<sup>1</sup>, A Puigdemont<sup>2</sup>

<sup>1</sup> LETI PHARMA S.L.U., Barcelona, Spain – \*rfoj@leti.com

<sup>2</sup> Departament de Farmacologia, Terapèutica i Toxicologia, Facultat de Veterinària, Universitat Autònoma de Barcelona, Bellaterra, Spain

## BACKGROUND

Canine leishmaniosis (CanL) is a zoonotic vector-borne disease **endemic in more than 90 countries**. Due to its highly variable range of clinical presentations [1,2], **the management of CanL remains a major challenge**.

**Up to 80%** of clinically diagnosed dogs present **dermatological signs**, being exfoliative dermatitis, ulcerative dermatitis, alopecia and onychogryphosis the most seen [3,4].



## OBJECTIVE

To assess the **efficacy of the LetiKerato Shampoo and Lotion in CanL diagnosed dogs with keratoseborrheic disorders** treated concomitantly with the standard CanL systemic treatment.

## STUDY DESIGN

A prospective, multicenter, open-label, randomized controlled field trial was carried out in Spain.

Client-owned dogs diagnosed with CanL and with exfoliative dermatitis were randomly allocated to **two groups**:

**CONTROL**  
Standard CanL treatment  
Glucantime® - Merial subcutaneously; 100mg/kg; daily for 4 weeks  
Zyloric® - GlaxoSmithKline orally; 10mg/kg; twice a day for 6 months

**LETIKERATO**  
LetiKerato line + Standard CanL treatment  
LetiKerato Shampoo formula PLUS once a week for 28 days  
LetiKerato Lotion after the bath and between baths for 28 days  
+ Standard CanL treatment



Dogs were **followed-up at days 14 and 28** after the start of treatment by the veterinary dermatologist. Clinical improvement of the keratoseborrheic skin lesions was based on the reduction in size of the affected areas (Table 1) and evaluated through a complete dermatological examination and representative pictures:



Statistical analysis was carried out using PRISM v8.1.2. (GraphPad. Software Inc.; San Diego, CA, USA). Quantitative variables were compared by Student's t-test and categorical variables by Chi-Square test. A p-value of <0.05 was considered statistically significant.

CLINICAL IMPROVEMENT	SCORING	
	Quantitative	% of improvement ranging from 0 to 100% with intervals of 10
Reduction in size of affected areas	Qualitative (categories)	no improvement (0%) mild (10-30%) moderate (40-60%) high (70-90%) complete (100%)

Table 1: Clinical improvement scoring.

## RESULTS

At the time of inclusion, enrolled dogs (n=16) presented, in addition to **exfoliative dermatitis** (16/16 dogs; 100%), **alopecia** (11/16 dogs; 69%) and **ulcerative dermatitis** (9/16 dogs; 56%), as the most prevalent clinical manifestations (Figure 1).

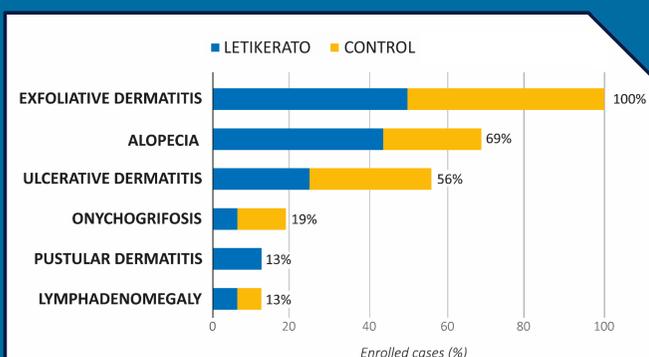
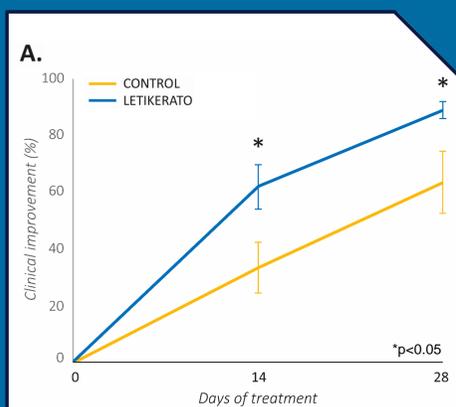


Figure 1: Prevalence and characterization of clinical signs in enrolled dogs.



Clinical improvement of the keratoseborrheic skin lesions was statistically significantly higher in the LetiKerato group at days 14 and 28 (62 ± 7.88% vs 33 ± 8.98%, p=0.0142, and 89 ± 2.99% vs 63 ± 10.98%, p=0.0240, respectively) (Figure 2A).

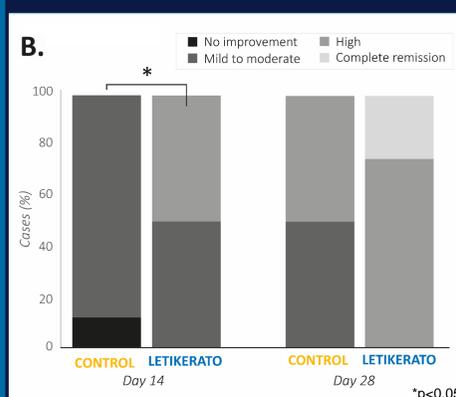


Figure 2: Clinical improvement assessment.

At day 14, a statistically significant improvement of affected areas was observed in the LetiKerato group (p=0.0455): 4/8 cases (50%) presented "high improvement", whereas in the control group none of them manifested that recovery rate.

At the end of the study, **only cases treated with the LetiKerato line showed a complete remission of exfoliative dermatitis** (2/8 dogs; 25%) (Figure 2B and Figure 3).



Figure 3: Clinical improvement of a LetiKerato group case.

## CONCLUSIONS

Combined use of the CanL standard systemic treatment with the **LetiKerato Shampoo and Lotion** in CanL dogs with keratoseborrheic disorders was associated with a **more rapid and significant clinical improvement** of these affected skin areas, compared with the standard therapy.



The keratolytic and keratoplastic properties of gluconolactone stimulates natural skin repair.



Shampoo therapy should be considered as an effective complement in the treatment of skin changes linked to canine leishmaniosis.

## References

- Baneth G., Koutinas AF., Solano-Gallego L. et al. Canine leishmaniosis - new concepts and insights on an expanding zoonosis: part one. Trends Parasitol. 2008; 24:324-30.
- Solano-Gallego L., Koutinas A., Miró G. et al. Directions for the diagnosis, clinical staging, treatment and prevention of canine leishmaniosis. Vet Parasitol. 2009; 165:1-18.
- Saridomichelakis MN., Koutinas AF. Cutaneous involvement in canine leishmaniosis due to Leishmania infantum (syn. L. chagasi). Vet Dermatol. 2014; 25:61-71.
- Solano-Gallego L., Miró G., Koutinas A. et al. LeishVet guidelines for the practical management of canine leishmaniosis. Parasit Vectors. 2011; 4:86.

