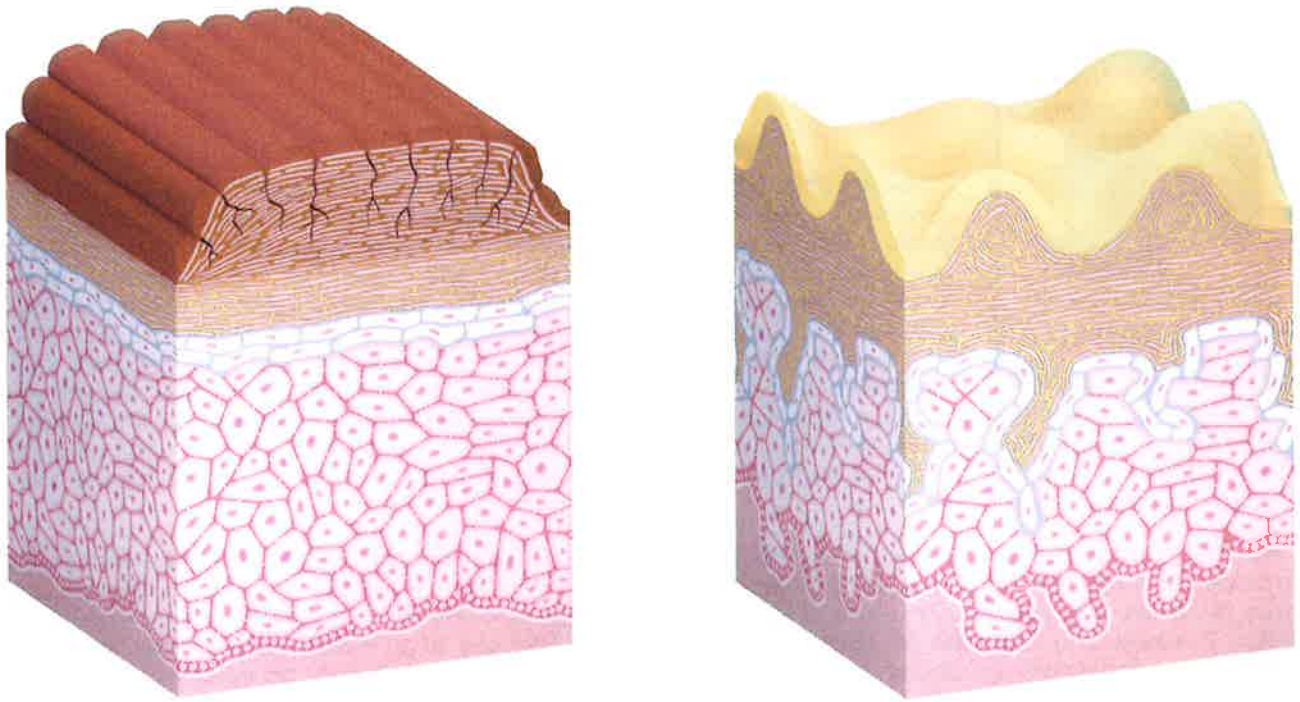
Chapter IV - Hyper-keratinization and more

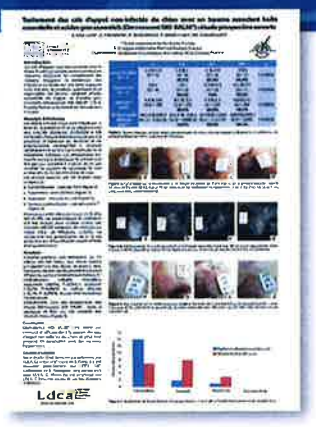
Hyperkeratosis refers to an increase in thickness of the stratum corneum. This clinical presentation is found in some skin diseases and tends to affect certain locations, such as the nose, pads, elbows and friction areas (these are called "calluses"). Dermo-cosmetics play a major role in moisturizing the skin, reducing the size of the hyperkeratotic areas, and avoiding common infectious complications, which can become problematic over time. It's recommended to apply moisturizing and mild keratolytic active ingredients to treat a thickened stratum corneum. Balms, ointments, and creams are the most suitable choices. For the nose, it may sometimes be necessary to use gels that penetrate quickly and are less easily removed by the almost systematic licking of this area after application. They must be used regularly (at least once a day) to ensure a satisfactory efficacy.

> From **Handbook of Veterinary Dermo-Cosmetics** by Dr. E. Bensignor and Dr. E. Vidémont - ***Med'Com 2016***



Hyperkeratosis

Scientific evaluation of Dermoscent BIO BALM®, its use and efficacy in treating superficial abrasions & hyper-keratinisation of localized areas in dogs



An open prospective study on control of non infected calluses in dogs treated with Dermoscent BIO BALM® composed of essential fatty acids and essential oils,

by Dr. E. Gaillard, Dr. C. Pressanti, Dr. MC. Cadiergues, Dr. E. Bensignor.

> Poster presented as Short Com at the ***2012 Congress of European Society of Veterinary Dermatology*** (ESVD) held in Brussels / doctoral thesis of Dr. E. Gaillard at Ecole Nationale Vétérinaire de Toulouse, France.

Pressure points calluses are easily considered as minor disorders yet common in dogs. Few specific topical cares are available and **Dermoscent BIO BALM®** is a natural composition of essential fatty acids from plant extracts and essential oils in phase with pet owners' expectations. Owners were instructed to apply the product once a day during 3 months. Each callus was evaluated on 4 criteria by scoring: lichenification, scaling, thickness and affected surface. 74 calluses from 35 dogs were evaluated on D0, D30,D60 et D90. Scores were significantly reduced all along from D30 till D90 on the 4 above stated criteria as **-32%** (p<0,0001), **-54%** (p<0,0001), **-16%** (p<0,0001), **-20%** (p<0,0001) on D30 and **-67%** (p<0,0001), **-86%** (p<0,0001), **-31%** (p<0,0001) and **-38%** (p<0,0001) on D90.

No adverse reactions. **Dermoscent BIO BALM®** is proven effective and safe to treat non infected canine calluses. It is recommended along with other hygiene measures as regular and useful.

	D0	D30	D60	D90	p
Lichenification (0 – 4)	2.2 ±1.4 (0 – 4)	1.5±1 (0 - 4) 31,5%	1±0.9 (0 – 3) 55,4%	1±1 (0 – 2) 66,8%	< 0,0001
Squamosis (0 – 4)	1±1 (0 – 4)	1±1 (0 – 2) 54,2%	0.3±0.5 (0 – 2) 78%	0.2 ± (0 – 2) 85,9%	< 0,0001
Thickness (mm)	9.8±3.6 (3.6 – 18)	8.2±2.5 (2.5 – 15) 16,4%	7.1±2.7 (2 – 15) 26,8%	6.8±2.6 (2 – 15) 30,7%	< 0,0001
Total affected area (mm^2)	467.4±438.3 (61.2 – 2381.8)	375.1±356.5 (32.9 – 1482.1) 19,8%	327.8±314.0 (8.1 – 1127.5) 29,9%	289.4±330.7 (5.9 – 1390) 38,1%	< 0,0001

Mean ± sd (min-max) scores, percentage reduction from baseline of four criteria over the study period and Wilcoxon test results, p=0.05

Scientific evaluation of Dermoscent BIO BALM®, its use and efficacy in treating superficial abrasions & hyper-keratinisation of localized areas in dogs

Control of idiopathic nasal hyperkeratosis in dogs with balm containing a mixture of essential oils and essential fatty acids: a randomized, double-blinded, placebo-controlled clinical trial, by Dr. M. Catarino, Dr. C. Pressenti, Dr. P. Mimouni, Dr. MC. Cadiergues.

> Abstract presented as a Short Communication at ***2015 ESVD Congress*** held in Krakow, and published in the Congress proceedings in **Veterinary Dermatology** (2015); 26: p.303.

Hyperkeratosis most often results from failure in the process of corneogenesis. This lesion, frequently encountered on noses of dogs, is often considered as a cosmetic problem by pet owners. However, sometimes cracks appear, increasing the risk of infection. Currently, practitioners lack proof of efficacious methods to control this condition and prevent the infection. Indeed, keratolytic and moisturizer products are recommended but the application of several topical products limits compliance given this tedious task of owners to treat the nose of their pet for life.

The aim of this study was to investigate the efficacy of a balm containing a mixture of essential oils and plant extracted essential fatty acids (**Dermoscent BIO BALM®, LDCA**, France). It outlines an easy treatment of idiopathic nasal hyperkeratosis in dogs through a placebo-controlled, randomized, double-blinded clinical trial.

The trial was made over 2 months on 47 dogs suffering from idiopathic nasal hyperkeratosis treated either with **Dermoscent BIO BALM®**, or a placebo composed of gellified water an with equivalent consistency to the balm. All dogs were randomized to receive a daily topical application of either **Dermoscent BIO BALM®** or placebo. 4 criteria were evaluated : lichenification, surface extension, skin dryness, skin suppleness, and. Evaluation was made on D0, D30 and D60.

No major adverse event was reported. Significant improvement was observed on all four criteria all along the 60 days of trial. The improvements on D60 for lichenification, surface extension, skin dryness and total scores are at respectively **-31.2%**, **-18.3%**, **-72.8%** and **-36.8%** in group of **Dermoscent BIO BALM®** and **-11.9%**, **2.3%**, **-42.1%** and **-14%** in group placebo. Owner satisfaction was claimed by **81%** from treated group.

This double-blind study shows the interest of using **Dermoscent BIO BALM®** as a skin repair for idiopathic nasal hyperkeratosis lesions in dogs.
Dermoscent BIO BALM® is proven safe and useful in the management of canine idiopathic nasal hyperkeratosis and could be suggested as a long-term therapy.

Before **Dermoscent BIO BALM®**

After **Dermoscent BIO BALM®**