



Healing effect of Dermoscent BIO BALM® on pedal lesions on sled dogs

A. BOUVIER*, C. THORIN†, H. POULIQUEN‡ and P. BOURDEAU*

Departments of: *Clinical sciences, †, Management and statistics ‡ Biology, Pathology and Nutrition Sciences, Veterinary School (Oniris), University of Nantes, F



Résumé : Chez les chiens de traîneau les pododermatites, induites par l'entraînement, sont fréquemment une source de douleurs et de boiteries. Indépendamment du port de bottines protectrices une gestion adaptée est souvent nécessaire. L'objectif ici a été d'évaluer l'effet de l'application du baume Dermoscent BIO BALM® (Laboratoire Dermo Cosmetique Animale, Castres, F) sur la guérison des lésions induites par l'effort.

Les 30 chiens inclus ont été traités sur les coussinets des pattes droites (les gauches restant non traitées) : total: 60 traitées, 60 contrôles. Dermoscent BIO BALM® était appliqué, quotidiennement, avant et après l'entraînement (15 à 50 km) pendant 15 jours. L'érythème et les abrasions ont été évaluées avant et après entraînement aux jours : 1, 2, 4, 5, 8, 9, 12, 13 et 15. Quand des lésions bilatérales étaient constatées le même jour (= BL), le délai de guérison était comparé entre coussinets traités et non traités (Khi 2). Erythème et abrasion ont été observés sur 16/60 pattes traitées et 19/60 pattes non traitées et respectivement 93.7% (15/16) et 42.1% (8/19) ont guéri (P -value < 1.5e-3). Parmi les 15 chiens à lésions BL, 14/15 (93.3%) des pattes traitées ont guéri beaucoup plus vite que les non traitées. Plus de la moitié des coussinets traités (8/15 = 53.3%) ont guéri dans la journée de l'application contre aucun des coussinets non traités (P -value < 1.0e-3). Après seulement 4 jours, 11/15 (73.3%) des pattes traitées ont guéri contre seulement 6/15 (40%) des pattes non traitées (P -value < 6.7e-2).

Dermoscent BIO BALM® semble efficace pour aider et accélérer la guérison des lésions podales induites par les efforts intensifs des chiens de sport.

Summary : Pododermatitis is frequent in causing pain and lameness on sled dogs due to training conditions. Regardless of protective boots that dogs wear to prevent lesion deterioration, a proper treatment is often necessary. The objective of this study was to evaluate the healing effect of Dermoscent BIO BALM® (Laboratoire Dermo Cosmetique Animale, Castres, F) on lesions induced during training.

Thirty included dogs received an application of balm on right footpads (left ones as control) (total: 60 footpads treated, 60 untreated). Dermoscent BIO BALM® was applied before and after daily running (15 to 50 km) during 15 consecutive days and erythema/abrasion evaluated on all footpads twice daily, before and after training, on days 1, 2, 4, 5, 8, 9, 12, 13 and 15. When bilateral lesions occurred on a dog on the same day (= BL), the time for healing was compared between treated and untreated pads (Chi-squared test).

Erythema/abrasion was detected on 16/60 treated pads and 19/60 untreated pads among which respectively 93.7% (15/16) and 42.1% (8/19) were healed (P -value < 1.5e-3). Among 15 BL dogs, 14/15 (93.3%) treated pads healed much faster than the non-treated ones. More than half of treated pads (8/15 = 53.3%) were healed within one day of application versus 0 for untreated pads (P -value < 1.0e-3). After only 4 days, 11/15 (73.3%) of treated feet healed versus 6/15 (40%) of untreated feet (P -value < 6.7e-2).

Dermoscent BIO BALM® appears effective in aiding and speeding the healing of feet during intensive training of sporting dogs.

Background

- Sled Dogs are sportive animals trained for long runs.
- Pododermatitis frequently induced during competition or training.
- Limited number of studies and cases analysed.

Aim of the study

- To evaluate the healing effect of Dermoscent BIO BALM® on lesions resulting from sled dog training.

Material and Methods

Dogs included

- 30 sled dogs from 5 mushers.

Methods

- Period of study: sequences of testing between november 2018 and march 2019.
- Trial performed on 15 consecutive days.
- Balm (Balm Dermoscent BIO BALM®) applied on right foodpads only (left ones as control), before and after daily training.



- Evaluation of erythema/abrasion: All footpads twice daily, on days: 1 - 2 - 4 - 5 - 8 - 9 - 12 - 13 - 15.
- Data collected on observation books.
- Comparison of the « healing time » between treated and untreated pads when bilateral lesions (BL) occurred on the same day

Statistics

- Chi-squared test - R Studio software.

Ethical committee Number : CERVO-2018-11-V

Results

GLOBAL:

- 165 balms Dermoscent BIO BALM® used.
- 1560 observations were made and 60 pads were treated with the balm, corresponding to 1800 applications.
- 189 lesional foot pads observed during the training.

TOLERANCE: No record of side effects due to the application.

LESIONS: 16/60 (26,7%) treated pads ; 19/60 (31,7%) untreated pads

HEALING: see Fig. 1

93.7%(15/16) treated; 42.1%(8/19) untreated (P -value < 1.5 e-3).

BL DOGS:

- 14/15 (93.3%) treated pads healed faster than untreated ones. **Fig. 2**
- 8/15 (53.3%) treated healed within 1 day of application none of untreated pads (P -value < 1.0 e-3).
- After 4 days, 11/15 (73.3%) of treated feet healed versus 6/15 (40%) of untreated feet (P -value < 6.7 e-2). **Fig. 3**



Example of healing: Right front pad (BIO BALM 3 days of application)

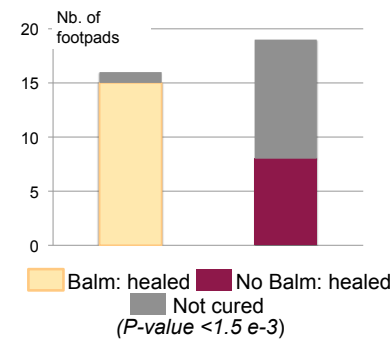


Fig 1. Erythema/abrasion detection and global healing

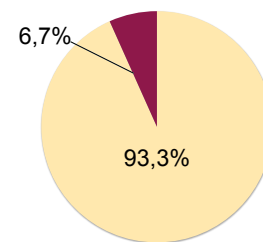


Fig 2. Simultaneous bilateral lesions on 15 dogs : speed for healing



Sled Dog running on Lekkarod Race

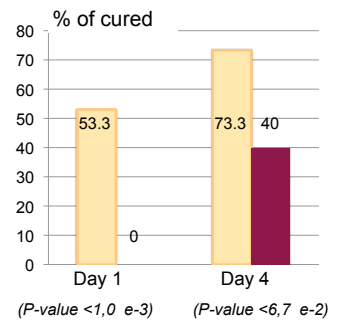


Fig 3. Time for healing of BL lesions

Conclusion

- When applied, twice a day, on erythema and erosion induced by training, the Balm increases significantly the percentage of cured.
- A benefit almost constantly obtained as compared to untreated footpads.
- The effect is observed, within one day, on more than half of the cases.
- Thus Dermoscent BIO BALM® appears effective in helping and speeding the healing of feet during intensive training of sporting dogs.

References : * Catarino Mathilde, « Intérêt de l'application d'un réparateur cutané Dermoscent BIOBALM chez des chiens présentant un défaut de cornéogenèse de la truffe: étude clinique, Th. Med. Vet, Toulouse, 2014
* Grandjean Dominique, *Guide pratique du chien de sport et d'utilité*, 3rd edition, Aniwa Publishing, 2005.

Contacts :

patrick.bourdeau@oniris-nantes.fr
pjbourdeau44@gmail.com
amandinebouvier@free.fr



The authors acknowledge the "Laboratoire Dermoscent" for providing the balm for free to participating mushers.