

# Control of non-infected calluses in dogs with a mixture of essential oils and essential fatty acids (Dermoscent BIO BALM®): an open prospective study

E. GAILLARD\*, C. PRESSANTI\*, E. BENSIGNORS, C. MARTIN-VO†, MC. CADIERGUES\*



\*Toulouse veterinary school, Toulouse, France  
§ Veterinary Clinic, Rennes-Cesson, France  
† Laboratoire de Dermo-Cosmétique Animale, Castres, France



### Background

Pressure points calluses are very common in dogs. They are considered as minor unless infected. In addition to hygienic measures, prevention of infection is based on topical care but very few specific products are available.

A mixture of essential oils and essential fatty acids (Dermoscent BIO BALM®, LDCA Castres, France), available as a balm was evaluated on non-infected calluses in dogs.

### Material & Methods

Dogs were included on the basis of one or several non-infected calluses. Absence of infection was confirmed clinically (absence of pus oozing under pressure) and on the absence of bacteria and neutrophils on surface tape strip cytology.

The owners were instructed to apply the product once daily for 3 months. Owners were also instructed to keep their dog’s bedding unchanged to avoid bias.

The following criteria were evaluated for each callus:

- Lichenification - score 0 to 4 (figure 1) ,
- Scaling - score 0 to 4 (figure 1),
- Thickness - measured in mm (figure 2),
- Total affected area - calculated in mm² (figure 3).

Evaluation was performed on day 0 and subsequently on day 30, 60 and 90. Percentages of reduction were calculated for each criterion. Intention-to-treat data were analysed (Wilcoxon test, p = 0,05).

Owners satisfaction rate survey was done related to their opinion about the product and its efficacy.

### Results

Seventy-four calluses from 31 dogs were included in two centers. Dogs were principally large-breed dogs.

Scores were significantly reduced at day 90 compared to baseline (table I) : lichenification (-66.8%, P<0.0001), scaling (-85.9%, P<0.0001), lesion thickness (-30.7%, P<0.0001) and total affected area (-38.1%, P<0.0001). No adverse effects were noted.

Overall, 94% of the owners found Dermoscent BIO BALM® as easy to apply and the final result was satisfactory for 83% (figure 4).

### Conclusion

Dermoscent BIO BALM® proved safe and effective in the management of non-infected canine calluses and could be suggested combined with hygienic measures.

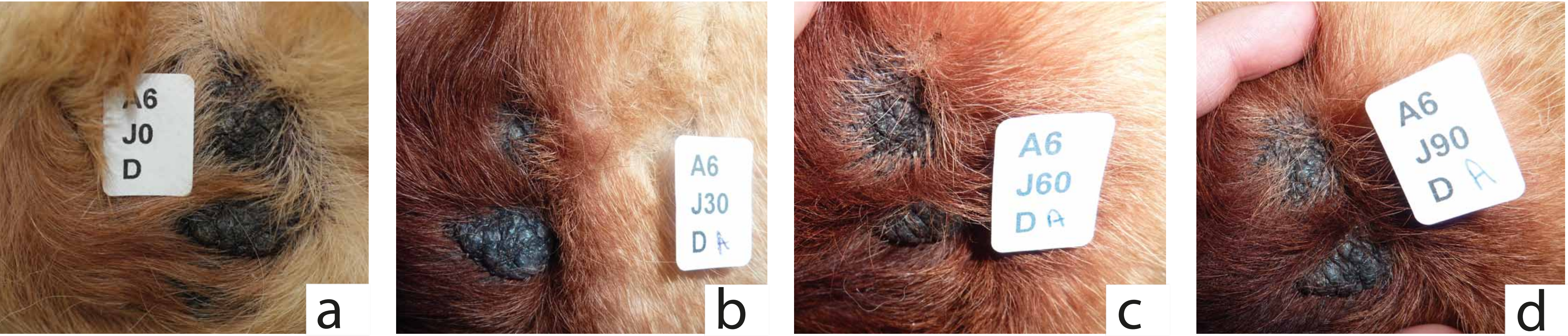
### Conflicts of interest

This study was partly funded by LDCA.

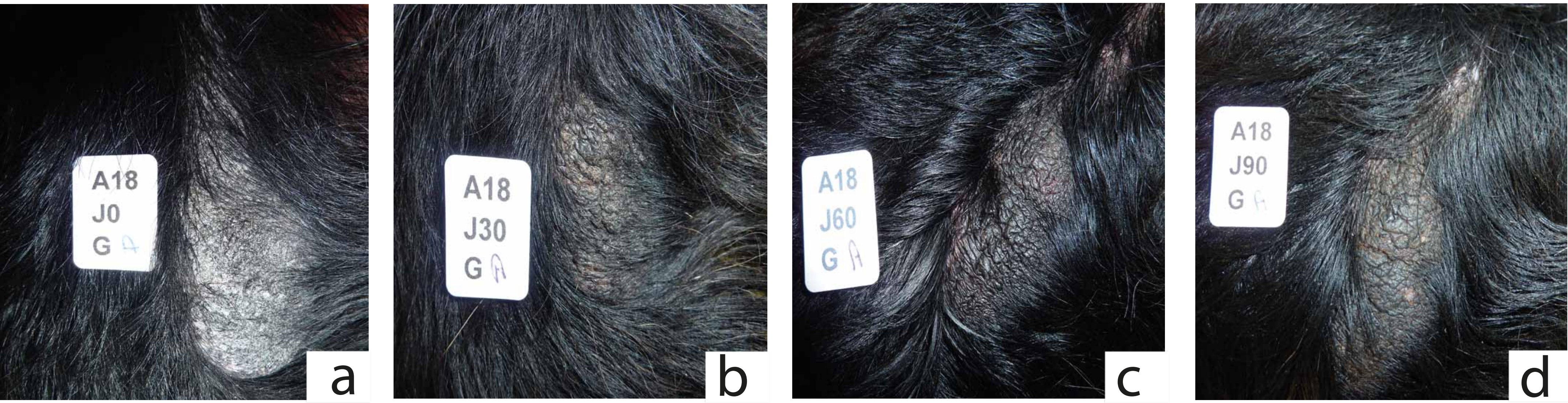
E. Gaillard’s veterinary thesis was partly supported by LDCA. MC. Cadiergues and E. Bensignor are consultants for LDCA. C. Martin-Vo is employed by LDCA. C. Pressanti has no conflict of interest to declare.

|                           | D0                             | D30  | D60   | D90   | p        |
|---------------------------|--------------------------------|--|---|---|----------|
| Lichenification (0 – 4)   | 2.2±1.4<br>(0 – 4)             | 1.5±1<br>(0 - 4)<br><b>31,5%</b>               | 1±0.9<br>(0 – 3)<br><b>55,4%</b>              | 1±1<br>(0 – 2)<br><b>66,8%</b>              | < 0,0001 |
| Scaling (0 – 4)           | 1±1<br>(0 – 4)                 | 1±1<br>(0 – 2)<br><b>54,2%</b>                 | 0.3±0.5<br>(0 – 2)<br><b>78%</b>              | 0.2±<br>(0 – 2)<br><b>85,9%</b>             | < 0,0001 |
| Thickness (mm)            | 9.8±3.6<br>(3.6 – 18)          | 8.2±2.5<br>(2.5 – 15)<br><b>16,4%</b>          | 7.1±2.7<br>(2 – 15)<br><b>26,8%</b>           | 6.8±2.6<br>(2 – 15)<br><b>30,7%</b>         | < 0,0001 |
| Total affected area (mm²) | 467.4±438.3<br>(61.2 – 2381.8) | 375.1±356.5<br>(32.9 – 1482.1)<br><b>19,8%</b> | 327.8±314.0<br>(8.1 – 1127.5)<br><b>29,9%</b> | 289.4±330.7<br>(5.9 – 1390)<br><b>38,1%</b> | < 0,0001 |

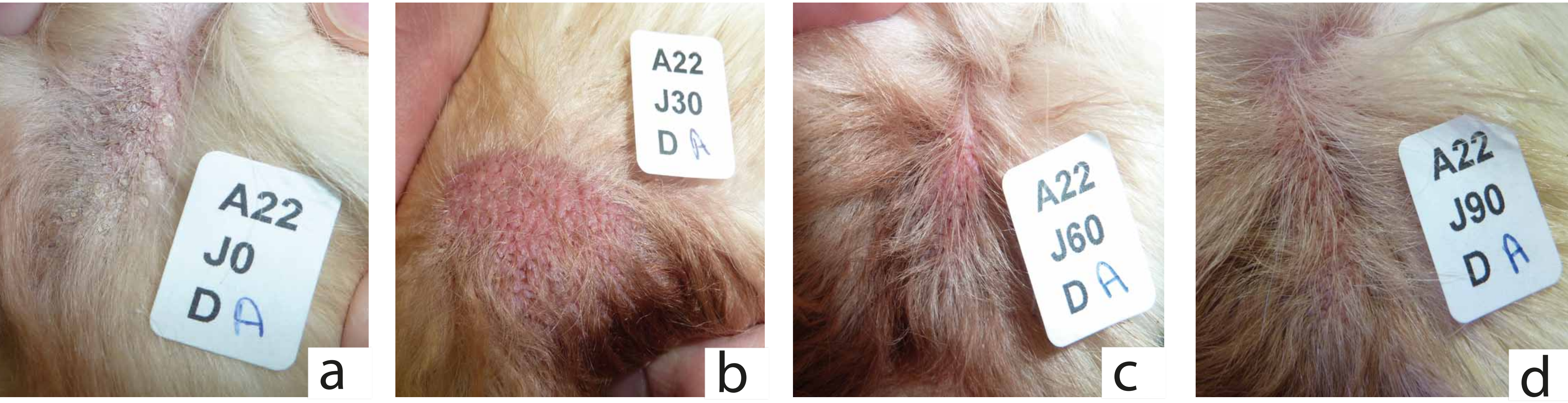
**Table I :** Mean±sd (min-max) scores, percentage reduction from baseline of four criteria over the study period and Wilcoxon test results, p = 0,05.



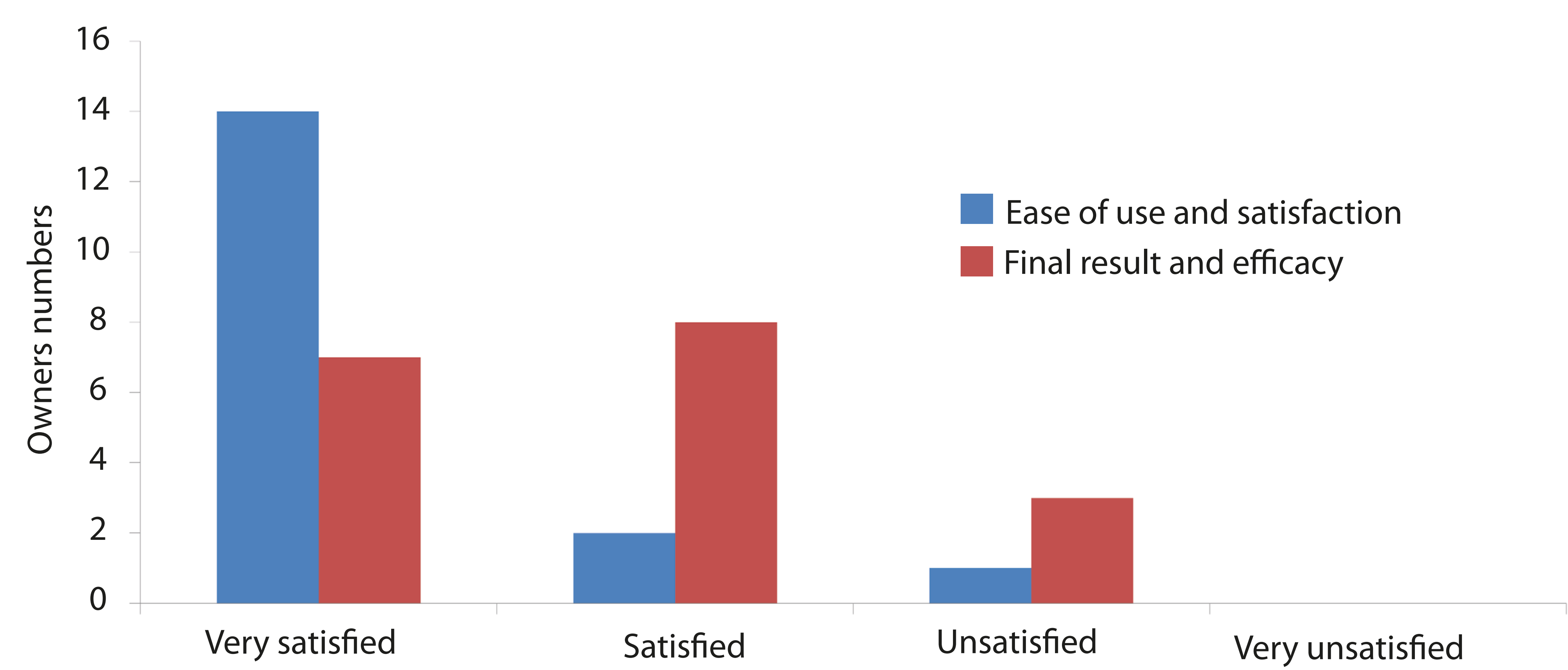
**Figure 1 :** Pressure point callus on the right elbow of a nine-year-old German Shepherd (case 6) over the study period - Day 0 (a); day 30 (b); day 60 (c) and day 90 (d). Lichenification and scaling scores were 4 (a); 3 (b); 2 (c); 1.5 (d) and 1 (a); 0 (b); 0 (c) 0(d), respectively.



**Figure 2 :** Pressure point callus on the left elbow of a seven-year-old giant Schnauzer (case 18) over the study period - Day 0 (a); day 30 (b); day 60 (c) and day 90 (d). Callus thickness was 9 mm (a); 8 mm (b); 7.6 mm (c); and 7.3 mm (d).



**Figure 3 :** Pressure point callus on the right elbow of a two-year-old Golden retriever (case 22) over the study period - Day 0 (a); day 30 (b); day 60 (c) and day 90 (d). Total affected area was 382 mm² (a); 407 mm² (b); 195 mm² (c); and 132 mm² (d).



**Figure 4 :** Owners satisfaction rate survey related to owners’ opinion about the product and its efficacy.