THE APIPHYTOTHERAPY WITH PROACTIVATOR IN THE VETERINARY DERMATOLOGY AND SURGERY

APIFITOTERAPIA CU PROACTIVATOR IN DERMATOLOGIA VETERINARA SI IN AFECTIUNI CHIRURGICALE

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The main objective of this clinical study consisted in evaluation of the therapeutic effects of the propolis extract used in different disorders at company animals, thus being improved the palette of the apitherapeutical products used in veterinary purposes. The experiments were carried out on company animals (two experimental groups) during the 2007-2008 period, in the frame of the Veterinary Medicine Faculty – Bucharest and the University - Spiru Haret, at the veterinary departments: Parasitology, Dermatology and Surgery. The raw propolis was collected from the bee colonies belonging to the Institute of the Beekeeping Research & Development–Bucharest and the apiphytotherapeutical product based on propolis was obtained in the Apitherapy sector of the same Institute. In a first stage were obtained the anti-parasite, dermatological and surgical veterinary product PROACTIVATOR based on propolis alcoholic extract and Aloe vera gel. The experiments consisted in administration of the obtained preparation in different disorders on the experimental groups as: dermatological (plagues, chemical and physical burns), parasitological (extern parasites: scabies supra infected or not) and in veterinary surgery (as a protective layer applied on the sutured plague). In dermatologic disorders the effects of the PROACTIVATOR product were established by way of clinical periodical examinations until the total recover were done. In external parasites and connected disorders it was established the repellent or killing effect of the preparation on the infestation with parasites and the degree of control in the correlated infections. In skin tissue surgery it was established the cicatrising effect in sutured plagues and the anaesthesic local effect. The established of the studied preparation efficiency was similar as those used in classical treatments with synthesis products. The advantage of the utilization of PROACTIVATOR eliminates the toxic and cumulative effects of the chemical substances as it is well known.

Key word: propolis, company animals, surgery, dermatology
Introduction

Veterinary apitherapy is an integral part of unconventional therapies and, respectively, of alternative and complementary medicine. The growing interest in the use within veterinary medicine field of api-phyto-therapeutical products made us perform research to obtain new products and establish their therapeutical effects in various diseases: dermatological, parasitological and in dog’s veterinary surgery.

Materials and Methods

Studied product: “PRO-ACTIVATOR”
Object of research: clinical evaluation of administered product.
Beneficiary of the study: The Institute of Research and Development in Apiculture -Bucharest. Origin of the raw material: the propolis came from the bee colonies of THE INSTITUTE OF RESEARCH AND DEVELOPMENT IN APICULTURE, and the api-therapeutical product was obtained in the APITHERAPY SECTION of the Institute.
Location of experiment: Veterinary Medicine Faculty – Bucharest and Spiru-Haret University in Bucharest;
Calendar of pre-clinical study: July 2007 – December 2007

Stages of experiment:
- obtaining the api-phyto-therapeutical product: “PRO-ACTIVATOR”
- pre-clinical testing on lab animals
- clinical testing on pets, as destination of the products

The biological material that made up the witness and experimental lots was represented by:

- experimental lot (E1): 30 pets with various skin diseases–treated with PROACTIVATOR ; The Witness Lot (MI) – 15 dogs treated by medication;
- experimental lot (E2): 14 dogs, aged 3-14 years – treated with PROACTIVATOR in surgical protocol;

The experiment consisted in administering the api-phyto-therapeutical product in various diseases in animals:

1) dermatological diseases (wounds, chemical and physical burns);
2) parasitological diseases (external parasites – in pets: sarcoptic scab, superinfected or not);
3) surgical diseases (local applications on surgical wounds).

The researched api-phyto-therapeutical PROACTIVATOR has in its composition: propolis extract and aloe purified extract.

The cases selected by the Veterinary Clinic of “Spiru Haret” University in Bucharest and by the Veterinary Clinics - FMV Bucharest were investigated after clinical and laboratory examinations (determinations: microscopic examination of
hairs, microscopic examination of skin scrapes, cytological and hysto-pathologic examination of lesions). Research was performed on dogs of various ages and breeds.

**Skin diseases diagnosed in dogs and the therapeutic protocol applied**

<table>
<thead>
<tr>
<th>Disease</th>
<th>Lot E1 (no. of cases)</th>
<th>M1 (no. of cases)</th>
<th>Applied treatment Lot E1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scrape wounds</td>
<td>5</td>
<td>3</td>
<td>PROACTIVATOR</td>
</tr>
<tr>
<td>Allergy with flea sting</td>
<td>12</td>
<td>3</td>
<td>PROACTIVATOR</td>
</tr>
<tr>
<td>Sarcoptic scab</td>
<td>3</td>
<td>3</td>
<td>PROACTIVATOR</td>
</tr>
<tr>
<td>Surgical wounds</td>
<td>10</td>
<td>6</td>
<td>PROACTIVATOR</td>
</tr>
<tr>
<td>TOTAL</td>
<td>20</td>
<td>15</td>
<td></td>
</tr>
</tbody>
</table>

Lot M1 – 15 dogs treated with medication that had the same diseases

1) **Samples of populace**

**Experimental lot I (E1)**
- 30 pets between 1-7 years old having the following diseases: dermatological (wounds, chemical and physical burns), parasitological (external parasites in pets: sarcoptic scabs, superinfected or not) and in veterinary surgery (protecting layer applied to the surgical wounds)

**Experimental lot II (E2)**
- 14 dogs between 3-14 years old treated with PROACTIVATOR in surgery protocol

2) **Medication and therapy**

- active treatment “PRO-ACTIVATOR” – apiphytoterapeutical product
- witness lots were treated in the standard way for surgical wounds, external and dermatological dressings

3) **Mode of administration**

**Experimental lot I (E1):** apply 2 times/day the product PROACTIVATOR based on propolis until complete healing of the wound

**Experimental lot II (E2):** apply 1 time/day the product PROACTIVATOR

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**Results of the utilization of product PROACTIVATOR in certain pets**

<table>
<thead>
<tr>
<th>Disease</th>
<th>Nr. cases treated</th>
<th>Healed Lot E1</th>
<th>Nr. cases treated standard</th>
<th>Healed Lot M1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scrape wounds</td>
<td>5</td>
<td>5</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Allergy with flea sting</td>
<td>12</td>
<td>10</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Sarcoptic scab</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Surgical wounds</td>
<td>10</td>
<td>10</td>
<td>6</td>
<td>4</td>
</tr>
</tbody>
</table>

341
From the analysis of data in table no. 2 we note that the efficiency of the api-phyto-therapeutic treatment with PROACTIVATOR is equal or even higher to the standard treatments and the healing antibacterial effects need to deepen in surgical wounds.

*Therapeutic protocol applied in surgical wounds and results of PROACTIVATOR product utilisation*

Table 3

<table>
<thead>
<tr>
<th>It.</th>
<th>Breed, age</th>
<th>Diagnosis</th>
<th>Treatment</th>
<th>Number of applications</th>
<th>Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Crossbreeding, 12 years old</td>
<td>Infected bite wound,</td>
<td>PROACTIVATOR, 1 application /24 hours</td>
<td>10</td>
<td>Total recuperation</td>
</tr>
<tr>
<td>2</td>
<td>German shepherd, 3 years old</td>
<td>Cut wound</td>
<td>PROACTIVATOR, 1 application /24 hours</td>
<td>4</td>
<td>Application is tolerated</td>
</tr>
<tr>
<td>3</td>
<td>German shepherd, 6 years old</td>
<td>Allergic dermatitis with abundant exsudate</td>
<td>PROACTIVATOR, 1 application /24 hours</td>
<td>6</td>
<td>Associating with antiallergic treatment and test meal</td>
</tr>
<tr>
<td>4</td>
<td>Crossbreeding, 3 years old</td>
<td>Neurotrophic ulcer in carpal region, radial paralysis</td>
<td>PROACTIVATOR, 1 application /24 hours</td>
<td>12, below the bandage</td>
<td>Total recuperation, Recurrence in 30 days</td>
</tr>
<tr>
<td>5</td>
<td>Crossbreeding, 4 years old</td>
<td>Traumatic gangrene of tail</td>
<td>Amputation and post-surgical treatment of the wound with PROACTIVATOR</td>
<td>3</td>
<td>Total recuperation</td>
</tr>
<tr>
<td>6</td>
<td>Collie, 6 years old</td>
<td>Atopic dermatitis</td>
<td>Treatment with PROACTIVATOR in filmy uniform coat</td>
<td>20</td>
<td>After 14 days – regeneration of hair follicle</td>
</tr>
<tr>
<td>7</td>
<td>Schnautzer, 7 years old</td>
<td>Atonic wound in left flank</td>
<td>Wound toilet and daily applications with PROACTIVATOR</td>
<td>12</td>
<td>The first signs of recuperation – after 2 days by means of transformation of the appearance</td>
</tr>
<tr>
<td>8</td>
<td>Crossbreeding, 10 years old</td>
<td>Suppurating wound in left thigh</td>
<td>Wound toilet and daily applications with PROACTIVATOR</td>
<td>6</td>
<td>Total recuperation</td>
</tr>
<tr>
<td>9</td>
<td>Mioritic</td>
<td>Callosity in</td>
<td>Surgical treatment</td>
<td>12</td>
<td>Transformation</td>
</tr>
</tbody>
</table>
shepherd, 11 years old | funny bone and jarrets with infected ulcers | of the callosities and applications with PROACTIVATOR | n of the appearance and protecting role |
---|---|---|---|
10 | Crossbreeding, 4 years old | Phlegmon of the tail base | Extensive debridiation and painting with PROACTIVATOR. Antibiotic protection | 3 Total recuperation |
11 | Imperial caniche, 12 years old | Open infected old fracture | Mechanical asepsis, osteosynthesis, applications with PROACTIVATOR | 14 recuperation |
12 | Crossbreeding, 2 years old | Auricular ulcer | Rigorous toilet and daily painting with PROACTIVATOR | 9 Recuperation and recurrence after 30 days |
13 | Terra Nova, 4 years old | Recent cut wound in metacarpal and interdigital regions | PROACTIVATOR application /24 hours | 8 recuperation |
14 | Doberman, 7 years old | Wound in buttock region, self-inflicted wound | Immobilization, PROACTIVATOR, 1 application /24 hours | 10 Suppuration is steping down. Recuperation in 10 days |

**Results and Discussions**

**Preclinical testing**

*Preclinical testing* consisted in performing, monitoring and interpreting the evolution of the preclinical tests as regards acute and chronic toxicity, tolerance, embriotoxicity and mutagenesis on lab animals of the api-phyto-therapeutic product PRO-ACTIVATOR.

**Preliminary clinical testing**

In the *dermatological field* the effects of the administration of the product in various dermatitis were followed (atopic, contact, allergy to fleas), scrape wounds and lesions caused by skin parasites (Sarcoptex scabiae var. Canis). *Determinations*: periodical clinical examination until total disappearance of symptoms; lab tests to establish the type of dermatological disease; biopsy to establish the degree of regeneration and healing of the wounds.

In *external parasitological diseases* it was determined the anti-parasitological effect and the role of the product PROACTIVATOR in the prevention and combat of added bacterial infections. *Determinations*: clinical, microbiological and parasitological periodical examinations.
In the surgery of skin tissue we followed the healing effect on wounds, the vulnerary effect and local anaesthetic effect of the product PROACTIVATOR. Determinations: clinical examination under treatment of the lesion; reducing the edema and inflammation; start and develop the regeneration phenomenon; redo the structure of the affected tissue structure; samples collected from wounds for microbiological examination; biopsy to establish the degree of healing and regeneration of wounds.

Conclusions

1) The main purpose of the experiment consists in a better valorizing of propolis in our country and in the developing of veterinary apitherapy (the propolis extract is obtained through a technology that will make the object of a trade mark).

2) The apiphemothotherapy method with PROACTIVATOR (propolis extract 20% and Aloe vera gel) in dermatology and surgery show almost the same efficiency as classical treatment.

3) PRO-ACTIVATOR (an api-phyto-therapeutical product destined to dermatology and veterinary surgery)

4) Tolerance – because a bee nutritional product was designed and tested, that does not cause irritations, the tests on tolerance are not part of the rigor of testing medication products.

5) The efficiency of PROACTIVATOR was demonstrated by its superior effect in the healing of wounds and the vulnerary effect (higher speed of healing reduced the healing time by at least 50%) as well as the anti-microbial and anti-parasitological effect.

Bibliography


