

APIPHYTOTHERAPY WITH PROPOLIS, PLANTS EXTRACT AND ALOE VERA GEL IN INFESTED CALVES WITH TRICOPHYTON (*TRICOPHYTON VERRUCOSUM*)

Căuia E. *, Agripina Șapcaliu*, I. Rădoi, Cristina Preda*****

* Apiculture Research and Development Institute of Bucharest, **University of Agronomical Sciences and Veterinary Medicine of Bucharest, ***Institute For Diagnosis And Animal Health Bucharest, radoiion@yahoo.com

Key words: api-phyto-therapeutical products, tricophyton infested calves

Abstract. Api-phyto-therapy, a branch of non-conventional therapies, assures the healthy status of the organism, by detoxification and repairing the affected functions, reinstalling the homeostasis in the relationship with the extern factors.

The researches carried out in the frame of a CEEX research project -28/10.2005 aimed to obtain and test a new product used in mycotic dermatopathies.

To a number of 5 groups of calves (6 animals/group), clinically and laboratory diagnosed as tricophyton infested, it was daily applied, following the working protocol, different apy-phyto-therapeutical products, monitoring the effect on tricophytic lesions.

The groups were treated in 25 days as follows: group I – *Juglans graeca* extract; group II – *Aloe vera* extract and propolis; group III – *Juglans graeca* extract and propolis; group IV – *Aloe vera* extract, *Juglans graeca* extract and propolis; group V – same as group IV, followed by applying of Aloe vera gel and propolis gel.

The wound healing, keratolytic and keratoplastic effects of tricophytic lesions were observed after 14 days of treatment, especially in IV and V groups. The anti-mycotic effect of these therapeutically types involve a possible conditioning of the products in gel form, which ensure a better retaining and a faster healing.

Key words: api-phyto-therapeutical products, tricophyton infested calves

INTRODUCTION

The apy-phyto-therapy, based on hive products and plant extracts, unlike the allopathic medicine which regards the effect of diseases, and as a variant of the no conventionally therapy, it regard the causes of the diseases, redressing the organism after detoxification.

The researches, carried out in the frame of a research CEEX project with no. 28/10.10.2005, aimed to obtain and test some anti-mycosis products, based on hive products and plant extracts, having also no side effects and being used as an organic and cheaper alternative of treatment for the calves with tricophities diseases.

MATERIAL AND METHODS

In order to accomplish the proposed objectives, to obtain, characterize and test an antimycotic ecological product, efficient and cheaper, used to control the tricophities in calves, the researches were carried out in different stages.

In the first stage the calves with clinical signs of tricophities were identified in a milk bovine farm exploited in intensively system. The next stages consisted in calves isolation, marking and grouping in lots in order to apply the different schemes of treatments “in vivo” based on the apyphytotherapeutical products, physico-chemical analyzed and “in vitro” tested.

The samples (3) consisting in calves hair and crusts were collected from the group of 30 calves of 5-8 weeks in age, diagnosed with trichophytias. The samples were prepared for the mycological exams in laboratory in order to identify the fungus *Tricophyton verrucosum*.

The calves (Holstein race) diagnosed with trichophytias by laboratory exams were grouped for the different treatments as follow:

The lot 1 – treated with extracts of *Juglans graeca* by local and daily application on lesions;

The lot 2 – treated with extract of *Aloe vera* and *propolis* by local and daily application on lesions;

The lot 3 – treated with extracts of *Juglans graeca* and *propolis*, by local and daily application on lesions;

The lot 4 – treated with extracts of *Aloe vera*, extract of *Juglans graeca* and *propolis*, by local and daily application on lesions;

The lot 5 – identical application as in lot 4, by brushing, followed by application of gel obtained from *propolis* and gel of *Aloe vera*.

All the individuals were treated for 25 days, by local brushing with the apiphytotherapeutical products.

After the „in vitro” tests on new obtained product, it was used on 30 diseased calves, in farm condition. The animals in age of 5-8 weeks were grouped in 5 lot, clinically and para-clinically diagnosed clinic trichophytias (30 samples of hair + crusts, microscopically examined and micro biologically in laboratory for *Tricophyton verrucosum*). In all the period of treatments was examined the effect of the used products on the lesions, monitoring the healing process by complex laboratory exams.

RESULTS AND DISCUSSIONS

In the lot 1 treated with extract of *Juglans greaca*, the firsts signs of healing (the detachment) appear after 18 days and after 23-35 days of treatment were noticed the crusts disappearing, the cicatrising, the skin elasticity repairing and the beginning of the hair grow. The complete healing was noticed after 25 days in 4 calves, in other 2 calves noticing the persistence of the crusts; the laboratory exams highlighted on collected samples hyphens presented on 4 calves and spores at 3 calves.

In the lot 2 treated with extract of *Aloe vera* and *propolis*, the firsts clinical signs –the detaching the crusts, were presented after 16-18 days, being followed by cicatrisation. After 22-25 days of treatment, was noticed at the majority of calves the disappearing of the crust, the cicatrisation and the skin elasticity repairing, being followed by the initiation of hair grow. The totally clinic healing occur after 25 days in 4 calves, and in 2 calves the crusts were presented on a limited number of lesions. The laboratory exams highlighted hyphens on 3 calves and spores also on 3 cases.

In the 3 lot treated with extract of *Juglans greaca* and *propolis* the first signs of healing were occurred after 13-17 days, being followed by skin cicatrising. After 20-25 days of treatment it was noticed the complete healing in 5 cases, which presented no more supplementary lesions. Only in one calf were seen some crusts on 3 lesions, and in another case was noticed an incomplete cicatrisation on two lesions. The laboratory exam showed the presence of hyphens in 2 cases and spores in another 2 cases.

In the lot 4 – treated with extract of *Aloe vera*, *Juglans greaca* and *propolis* the clinical signs of improved situation were registered after 7-11 days, consisting in crusts detaching and beginning of skin cicatrisation. After 14-20 days of treatment was noticed the clinic healing, disappearing the crusts and cicatrisation followed by hair grow repairing, (one calf still

presented 2 crusts lesions). *The laboratory exam* highlighted the lack of the spores in all treated calves and the presence of the hyphens was noticed only to one calf after 20 days). After a prolongation of the treatment till 25 days was noticed the totally detaching of the crusts, but the hyphens were still present. In the next stage was made another group of calves diagnosed with trichophyties, formed by 6 calves (females and males) of 7-9 weeks in age, which were treated and surveyed for 25 days.

The lot 5 – the identical application were done as in the lot 4, but after the firsts application was applied also a gel based on Aloe vera and propolis, The obtained results after the combined treatments was noticed: the first clinical signs of status improvement which occurred after 4-5 days, when the crusts detached; the cicatrization occurred after 8-9 days, the process evolved till 12 days of treatment; the hair grow initiation was until 14-25 days. The healing of the lesions occurred in an interval of 10-16 days (the detaching of the crusts, cicatrization, skin elasticity repairing). The anti-mycotic effect of treatment was proved by the laboratory results: after 16 days of treatment (the lack of spores and hyphens in collected samples).

CONCLUSIONS

The anti-mycotic effect occurred after 10-16 days of treatment in all lots;

The application of solution followed by application of *Aloe* and *propolis* gel conducted to a better penetration and a faster detaching of the dermatophytic lesions, the cheratolitic, cheratoplastic and cicatrizing effect being more intense as compared with the simple utilization of the extract solution, the hair growing being occurred in 14-25 days.

The results regarding the laboratory exams shown the lack of the hyphens and spores following the application, after 16 days.

The anti-mycotic effect „*in vivo*” of the treatment require a possible conditioning process of the products in gel, which to include the extracts of *Aloe vera*, *Juglans greaca* and propolis, in order to have one daily application which to obtain a better anti-mycotic effect with a better healing of lesions.

BIBLIOGRAPHY

- 1 . Bârză H, F. Câlman, 1999, *Patologie medicală veterinară*. Editura Fundației România de Măine. București
2. Mihai D., V. Andronie, 2000, *Medicină internă a animalelor* vol I. Ed. Gee, București
3. Rădoi I., M. Cornilă, 2001, *Principii generale de terapie complementară și alternativă*. Ed. USAMV – București
4. Pârvu Constantin, 2006, *Enciclopedie de apiterapie*, București