Preliminary clinical study on the efficacy of propolis/aleo vera/chamomile compounded natural eye drops

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Abstract

A preliminary clinical study on the efficacy of propolis/aleo vera/chamomile (PAC) eye drops was conducted on 8 dogs and 2 cats affected by ocular surface disorders (CSD) non responsive to previous treatments. It was possible to apply the complete study protocol to 6 cases and clinical signs of ocular pain and discomfort were no more present at the recheck. In one case the study protocol was completed but clinical signs didn't improve. The treatment was discontinued by the owner's decision and the dog was, in cases 2 improvement was reported. In all cases with a positive outcome tear eosinophilic values were lower at the recheck. Nonetheless, the significance of tear film eosinophilia in dogs and cats is questionable (1, 2) and there are differences with human studies. Moreover, there are no published data to compare the instrument used in our study (Linseptivet) and what has been used in literature (1, 2).

Introduction

The use of natural eye drops in the treatment of pets ocular surface inflammatory processes is frequent on owners' belief, conventional wisdom and common sense. The prescription of natural compounded eye drops should be based on scientific proof of efficacy.

Purpose

To state the effects of PAC compounded eye drops in the OSD.

Material

The propolis/aleo vera/chamomile compounded eye drops were provided by Daphita (Vaxiovef, Ciongno, Uitumana(Daphita France). Certamen was checked by Linseptivet and Linseptivet sensors (i-med Canada). Ocular surface and meibomian glands examination was performed with OCA-Val, Tevela A and Msta-Val (IBM Siemens, Italy).

Inclusion criteria

Dogs and cats of different breeds, sex, age, with clinical signs of inflammation due to evaporative disaccharide or hyposecretoria, recurrent conjunctivitis, kerato-conjunctivitis, corneal erosion non responsive to previous treatments.

Clinical protocol and exams

Complete eye examination followed by CS specific tests selected case by case according to the ocular behaviour. Tear film (TF) quantitative tests (Schirmer tear test and meniscometry), TF qualitative exams (eosinophilia, interstamii, mabagraphy). CS stains (fluorescein and rose bengal). To all recruited animals PAC eye drops were applied for 15-20 days before the final recheck.


case 2

Poodle, female, 4-5 y.o. Long lasting KCS non responsive to conventional treatments.

radler, male, 7 y.o. Evaporative dry eye (EDE), meibomian gland dysfunction (MGD).

Boobla, female, 8 y.o. EDE, MGD.

Boobil, female, 6 y.o. Chronic conjunctivitis and keratitis with epithelial defects.

Crossbreed, female, 9 y.o. Chronic conjunctivitis, wet eye.

Poodle, female, 5 y.o. Chronic conjunctivitis, wet eye, MGD, EDE.

Piran cat, male, 8 y.o. Chronic conjunctivitis, chemosis, wet eye.

English Bulldog, male, 7 y.o. MGD, EDE, wet right eye.

Siberian cat, male, 2.5 y.o. Wet eyes, history of herpes kera tox conjunctivitis.

Jack Russell Terrier, female, 6.5 y.o. Recurrent corneal epithelial erosion.

Results

The behavioural signs of scratching and blinking disappeared in 6 rechecked animals (cases 1-6) with return to a normal animal behaviour and owners' satisfaction, in cases 7 and 8 an improvement was reported by the owners (but they didn't bring back their animals for a recheck. The cat (7) because the clinical signs disappeared. The dog (8) because an emerging neurologic disorder became a more important health priority. In case 9 clinical signs didn't improve and eosinophilia increased. In case 10 after a temporary improvement the dog showed evident pain at the instillation of the drops and treatment was discontinued.

Discussion

Among the data collected, eosinophilia tested by Linseptivet was the main parameter that changed after the treatment with PAC eye drops. In humans tear film hyperosmolality has been associated both to EDE and decreased tear secretion. (3) A link was reported between hyperosmolality and tear instability. (4) Hyperosmolality can induce epithelial cell apoptosis. (5) Tear eosinophilia has been demonstrated to have the highest correlation with disease severity of clinical DED tests (6) and has been frequently reported as the single best metric to diagnose and classify DED. (7, 8) In dogs tear film eosinophilia has high variability and poor-to-moderate repeatability and reproducibility (1). In cats tear-film eosinophilia doesn’t change in eyes affected by conjunctivitis. (2) All animals recruited in the present study were examined by the author in the same environmental conditions to decrease variables. In the KCS dog (case 1) tear eosinophilia decreased, quite the opposite of what described in literature (1). This happened to the other animals, affected by MGD and/or CS epithelial defects, potential causes of DED. Further studies on a higher number of animals and eosinophilia comparative tests carried out with the instruments used in published peer-reviewed articles are needed.

Conclusion

Due to the positive effects observed at the rechecks and confirmed by the owners of the animals recruited in this study and the absence of contraindications, propolis/aleo vera/chamomile compounded eye drops may be considered as a good choice for the treatment of ocular surface disorders causing clinical signs of pain and discomfort when more specific treatments are not advisable.

References


2. Davis K, Townsend W. Tear film eosinophilia in normal cats and cats with conjunctivitis. Veterinary Ophthalmology, 14, Supplement 1, S4-S9, 2011


