



TREATMENT OF TRAUMATIC ULCERATIVE KERATITIS IN A DOG BY HOMEOPATHY

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ABSTRACT

Eye affections are frequent in dogs. Among them, ulcerative keratitis is the most frequent and can be of traumatic origin or not. This condition destroys the corneal epithelium or stroma, often causing aesthetic damage associated with visual impairments to the animals. Clinical treatment is a meaningful way to avoid surgery, in which the patient needs to undergo an anesthetic procedure and a delicate postoperative period. However, corneal ulcers often do not respond to conventional treatment or have a delay in the healing process, developing discomfort to the patient and demanding daily care from owners. Homeopathic treatments have been successful in several acute and chronic diseases, and excellent results are reported. This study aimed to report the treatment of traumatic keratitis in a female dog using homeopathic medicines.

INTRODUCTION

The diseases that affect the cornea of dogs and cats can be caused by many different factors, threatening the visual acuity of patients when not properly treated¹. The cornea is the outermost layer of the eye and must remain transparent to support the vision. Ulcerated corneas may lose transparency and become particularly painful². This disease is responsible for various ophthalmic problems in small animals³. Most cases are considered a veterinary emergency as it threatens the quality of life, putting the visual capacity of patients at risk¹.

Ulcerative keratitis is an inflammation associated with loss of the corneal epithelium and possibly variable amounts of the layer below the corneal stroma. It can be caused by any condition, whether traumatic or not and destroys the corneal epithelium or stroma. It is characterized by a slow progression opacity of the corneal stroma, with minimal or absent associated inflammation, with often intact corneal epithelium^{4,5}. Blepharospasm, photophobia, and epiphora are commonly observed, evidencing the painful sensation from the damaged epithelium and secondary ciliary muscle spasms³. Diagnosis can be made by physical/visual examination, depending on the extent of the lesion. It can also be performed by a staining test of the injured epithelium, using commercial dyes based on fluorescein, for example. The therapeutic approaches are based on the relief of clinical signs and symptoms, prophylaxis or control of the infection, erosion, and suppression of the cause using conventional drugs⁶.

Among the various possible therapies for treating ulcerative keratitis, veterinary homeopathy is a technique that aims at harmonizing the vital energy using ultra-diluted medicines,

which can be of animal, vegetable, or mineral origin. Homeopathy has become an effective option in Veterinary. It is less invasive than conventional treatments besides being very efficient when well prescribed for certain cases. In addition, this therapy has several pharmaceutical forms for administering the medication to patients, which can be in the oral or injectable forms, eye drops, ointments, gels, creams. The objective of this report was to describe the treatment of a dog diagnosed with ulcerative keratitis in the left eye using veterinary homeopathy.

Experimental Section

A 10-year-old female Shih tzu, fertile, weighing 3.6 kg, was seen at Meu Amigo Clinic, located in Lins-SP, Brazil, with the main complaint of tearing and photophobia in the left eye for approximately three days. On clinical examination, the patient had a good overall condition, heart and respiratory rate within the expected normal for age and species, normal colored mucosa, TPC 2". Ophthalmic examination revealed a lesion in the left eye (Figure 1) characterized by conjunctival (Figure 1A) and scleral hyperemia, edema (Figure 1B), neovascularization (Figure 1A), accompanied by epiphora, blepharospasm, and pain. A fluorescein test was performed in the left eye, which was positive, showing rupture of the corneal epithelium and represented by a considerable erosive process (Figure 1B). The diagnosis was a superficial corneal ulcer of traumatic origin. The treatment was immediately initiated and consisted of using the CREB Homeopathic Eye Drops[®] (*Ruta graveolens* D3, *Euphrasia* D3, *Belladonna* D3, *Calendula* D3) instilled by ophthalmic route in the affected eye, three times a day for 30 days. The homeopathic complex *Silicea terra* 6CH, *Apis mellifera* 6CH, *Belladonna* 30CH was

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orally prescribed in a homeopathic formula, 10% alcohol, five drops, three times a day, for 30 days.

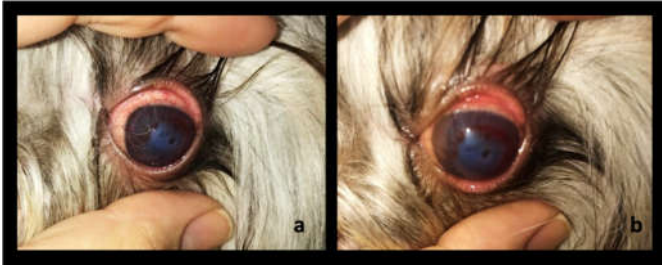


Figure 1 Representation of the initial lesion. A) Conjunctival hyperemia associated with neovascularization. B) Corneal ulcer, perilesional edema.

RESULTS AND DISCUSSION

Alterations in the corneal epithelium of dogs are relatively common, especially in brachycephalic dog breeds, such as the patient reported in the present study. The patient presented an ulcer of traumatic origin, probably due to greater cornea exposure, facilitating most ophthalmic trauma². The patient returned to the clinic for a follow-up 30 days after treatment initiation. Complete healing and regeneration of the affected corneal epithelium (Figure 2) were verified during the ophthalmic examination, with no possible scarring or any other alteration.

The medicines used for treating the patient were chosen based on the anatomopathological similarity: *Silicea terra* 6CH, *Apismelifera* 6CH⁷ and *Belladonna* 30CH. *S. terra* is considered a polychrest medicine with several sites of action. This medicine was chosen due to its direct activity on ulcers of all types, specifically, ulcers and abscesses of the cornea and eye inflammation caused by a foreign body. *A. melifera* was used due to the existing edema. Its enzymatic action due to phospholipase A2 increases the vascular permeability, triggers the histamine release, and causes cell lysis. It also releases hyaluronidase, which increases the permeability of the connective tissue. Therefore, this medicine has a high potential for treating this disease with ultra-diluted and dynamized solutions within the model of the law of similars⁷. *Belladonna* is indicated in acute and painful inflammation, similar to the clinical signs presented by the patient. Its parasympatholytic action through atropine, the main alkaloid in the fresh plant, and hyoscine, a scopolamine analog, has predominance for the globular eye⁸.

Commercial homeopathic eye drops were also prescribed for local treatment, playing an important role in pain and edema control. This medicine has *R. graveolens*, *Euphrasia*, *Belladonna*, and *Calendula* in its formulation. *R. graveolens* promotes iris muscle relaxation. *Euphrasia* is indicated for balancing the ophthalmic environment. *Belladonna* is indicated as described above. *Calendula* has an expressive healing action for the epithelium of the cornea⁹.

Our findings are corroborated by Falcão *et al.*⁶, who described that less invasive treatment methods should be considered for corneal wound healing and suggested the use of complementary treatments whenever possible. In this context, the present case demonstrates a less invasive treatment alternative for traumatic dermatitis, using topical and oral homeopathic treatments for this purpose.



Figure 2 Left eye after treatment.

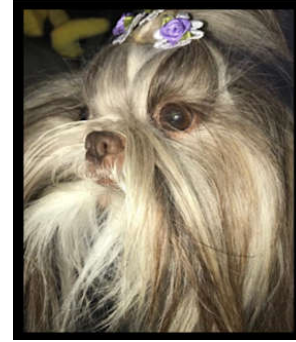


Figure 3 Patient after treatment.

CONCLUSION

This non-invasive method may be a simple solution to replace surgery, and it presented satisfactory results. Given the excellent result here recorded, we recommend further studies to validate these results so that more patients can benefit from this safe, painless, practical, sustainable, and accessible therapy.

Conflict of Interest

The authors declare that they have no conflict of interest.

Author Collaboration

Dr. Valle was responsible for data analysis, figures preparation, and manuscript writing. Dr. Barros was responsible for the clinical care of the reported case. Dr. Carvalho was responsible for the manuscript review and data analysis.

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