

Efficacy of a topical antibiotic-chondroitin sulfate solution in the therapy of recurrent corneal erosions: a preliminary report

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Purpose: To determine the efficacy of a topical chondroitin sulfate ophthalmic solution in the therapy of recurrent corneal erosions in domestic animals.

Methods: All animals diagnosed with recurrent corneal erosions were considered eligible for the study. Diagnosis of corneal recurrent erosion was based upon the presence of a superficial epithelial defect that retained fluorescein, non-adherent epithelium adjacent to the lesion periphery, and minimal stromal involvement. Erosions associated with significant corneal oedema were excluded from the study. Under topical anaesthesia, non-adherent epithelium was removed manually with cotton-tipped swabs at the initiation of treatment. Eyes were treated topically with a 100 mg/ml chondroitin sulphate and 3 mg/ml tobramycin ophthalmic solution (Tobramax®; Labyes S.A., Buenos Aires, Argentina) 3-4 times daily. Patients were reevaluated at 2 week intervals from the start of treatment for a total of 4 weeks. Erosions were considered healed when the cornea did not retain fluorescein and no epithelial folds were evident by biomicroscopy.

Results: To date, 52 eyes have been included in the study. Forty-nine dogs, 1 cat, and 1 rabbit have been treated. All patients had unilateral lesions, except one dog that presented with bilateral erosions. Patients had been treated by referring veterinarians from 1 to 90 days (mean 41 days) prior to presentation. After 2 weeks of therapy, 59.62% (31 of 52) of erosions had healed and after 4 weeks, 78.85% (41 of 52) of erosions had healed. The 11 erosions that had not healed after 4 weeks of therapy were treated with a multiple superficial punctate keratotomy and a soft contact lens. Following this treatment, 100% (11/11) of erosions healed within 14 days.

Conclusions: Topical therapy with an antibiotic-chondroitin sulfate ophthalmic solution compares favorably with other published medical and surgical therapies for recurrent corneal erosions.

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