SUCCESSFUL MANAGEMENT OF RECURRENT EOSINOPHILIC GRANULOMA WITH STEROIDS AND ANTIHISTAMINES IN A BLACK RHINOCEROS (Diceros bicornis)

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## **Abstract**

Skin diseases of the black rhinoceros (Diceros bicornis), including eosinophilic granuloma (EG), are well reported.<sup>2,3</sup> A 7-vr-old male captive-born male black rhinoceros presented with a hemorrhagic lesion on the mucosal surface of the upper lip. Histologic evaluation confirmed an EG with mixed cellular infiltrates and hyperplastic epithelium. Over the next 4 yr, the animal was anesthetized 14 times to treat nine episodes of EG, affecting the mucosa of the nasal and oral cavities, as well as, the skin of the prepuce. Symptomatic treatment consisted of cryotherapy, intralesional triamcinolone, or topical antimicrobial/steroid ointment, however, lesions continued to recur. Due to unrewarding results, significant behavioral changes, and the risks associated with repeated anesthesia, medical treatment was initiated using a tapering 12-day dose of oral corticosteroids (Dexamethasone; initial 0.1 mg/kg p.o., q 24 h x 3 days, then 0.075 mg/kg p.o., q 24 h x 3 days, then 0.05 mg/kg p.o., q 24 h x 3 days, then 0.025 mg/kg p.o., q 24 h x 3 days). The lesions dramatically improved within 1-2 days and completely resolved within one week, but would recur soon after treatment was discontinued. Continuous oral antihistamines (Hydroxyzine pamoate; 1 mg/kg p.o., q 12 h) were then provided as an immune modulator due to reported association between insect bite hypersensitivity and EG in horses. Treating medically with steroids and antihistamines has minimized anesthetic events and greatly reduced the incidence and severity of the lesions. An allergic etiology is suspected based upon the positive response to antihistamines.

## **ACKNOWLEDGMENTS**

The authors gratefully acknowledge the veterinary and animal care staff of the San Diego Zoo Safari Park.

## LITERATURE CITED

- 1. Mathison, P.T., 1995. Eosinophilic nodular dermatoses. Vet. Clin. North Am. Equine Pract. 11(1):75-89.
- 2. Munson, L., and R.E. Miller. 1999. Skin Diseases of Black Rhinoceroses. In: Fowler, M.E., and R.E. Miller (eds.). Zoo & Wild Animal Medicine, 4th ed. W. B. Saunders Co., Philadelphia, Pennsylvania. Pp. 551-561.

3.	Pessier, A.P., L. Munson, and R.E. Miller. 2004. Oral, nasal, and cutaneous eosinophilic granulomas in the black rhinoceros ( <i>Diceros bicornis</i> ): a lesion distinct from superficial necrolytic dermatitis. J. Zoo Wildl. Med 35: 1-7.