DIAGNOSIS AND MANAGEMENT OF INFLAMMATORY BOWEL DISEASE IN AN INDIAN RHINOCEROS (*Rhinoceros unicornis*)

Shannon T. Ferrell, DVM, Dipl ABVP-Avian, Dipl ACZM,* Annajane B. Marlar, DVM, Dipl ACVO,[1] and Nancy P. Lung, VMD, MS

Fort Worth Zoo, Fort Worth, TX 76110 USA

Abstract

A 20-yr-old, female Indian rhinoceros was diagnosed in early 2009 with inflammatory bowel disease based on weight loss, progressive diarrhea, bloodwork, and rectal biopsies. The rhinoceros had a previous history of a diffuse cutaneous vasculitis with epidermal necrosis in early 2008. By late 2008, a progressive diarrhea with weight loss was apparent. Bloodwork revealed a nonregenerative anemia, hypoalbuminemia, hyperglobulinemia, hyponatremia, and hypophosphatemia. Decreased serum folate and cobalamin levels were also observed. A protein losing enteropathy was suspected. A D-xylose study was unsuccessful. Rectal biopsies were collected using a small diameter PVC pipe passed into the rectum. A 3.0 mm, 3 m flexible endoscopic biopsy forceps was then repeatedly passed through the PVC pipe and manually guided to different sections of the rectum. The morphologic diagnosis was a severe, chronic, erosive, lymphoplasmacytic colitis.

Intramuscular dexamethasone was given to induce remission with a dramatic improvement in stool quality. Oral medications attempted included prednisolone and mesalamine with poor compliance. Rectal metronidazole was also attempted with no symptomatic relief. The best compliance and clinical remission was achieved with daily rectal prednisolone therapy via a suppository. The prednisolone was tapered over weeks to the lowest effective dose to reduce systemic effects. Repeat rectal biopsies documented an improvement in the degree of colitis. Over the 5 mo of immunosuppressive therapy, the diarrhea was controlled, but weight loss continued. Euthanasia was performed after 6 mo due to refractory weight loss. Necropsy confirmed the initial biopsy diagnosis with no indications of any opportunistic fungal or bacterial infections.