A Review of Common Diseases in Captive Reptiles

by
Michael Lindeen*
John Haupert†

Reptiles, as both pets and as laboratory animals, are becoming more popular. The small "dime store" turtle or red eared turtle has been popular for a long time, but making their way into homes are such reptiles as boa constrictors, garter snakes, black snakes, box turtles, caiman, aligators, iguanas, etc. With this increasing popularity it is important for the veterinarian to have some knowledge on the more common medical problems of captive reptiles. The purpose of this article is to try to pull together some of the more common problems encountered and their treatments. The majority of this paper is taken from work by Dr. J. D. Wallach[4] and Dr. Jon J. Bernstein.[1]

Common problems encountered in reptiles can be divided into environmental, infectious, and parasitic.

Environmental Diseases

Probably the most common environmental problem affecting newly acquired reptiles is that of abrasions of the lips as it paces the enclosure. A twofold treatment of providing a dark place for retreat and local application of petroleum jelly will usually take care of the problem.

Another environmental problem is that of proper nutrition. Dr. Jon J. Bernstein of the Los Angeles Zoo[1] reports that anorexia is probably the most common complaint of reptile owners. Anorexia can be due to poor husbandry or the failure to recognize the initial signs of illness. Treatment can be force feeding of preferably an amino acid, dextrose hypodermoclysis. In snakes, he prefers to inject subcutaneously along the dorsolateral line and in the posterior thigh in turtles and lizards. The inclusion of B vitamins is beneficial.[1]

Avitaminosis A is common in turtles and is characterized by edema of the eyelids. Supplementation with cod liver oil should reverse the edema.

Avitaminosis D results in typical rickets in all reptiles. Cod liver oil supplementation will also reverse the condition in growing individuals.

Vitamin C deficiency is thought to be the initial cause of ulcerative stomatitis. The disruption of the oral mucosa allows the invasion of bacteria normally found in the mouth. This appears to be substantiated when affected individuals are treated with appropriate drugs; the percentage of recoveries is greater when supported by vitamin C therapy.

Calcium deficiency or a calcium phosphorus imbalance is commonly seen in turtles and lizards as shell and bone malacia. Addition of whole food such as insects, earthworms and green leafy vegetables does much to correct the imbalance.[1]

Infectious Diseases

Reptiles are subject to a variety of infections with gram negative bacilli; *Pseudomonas* spp. and *Proteus* spp. are the most frequently reported. Most of the bacterial infections appear as: 1. gastroenteritis which appears as regurgitation, diarrhea or constipation, and anorexia; and 2. pneumonia which is seen as dyspnea and cyanosis of the oral mucous membranes. Dr. Wallach has had satisfactory results with sulfamethazine in the drinking water at 1 oz/gal. for 10 days.

* Mr. Lindeen is a fourth year student in the College of Veterinary Medicine, Iowa State University.
† Mr. Haupert is a fourth year student in the College of Veterinary Medicine, Iowa State University.

Local infections, seen commonly as necrotic or ulcerative stomatitis or mouth rot are usually due to *Pseudomonas* or *Aeromonas*. It is the most common specific infection in snakes. It appears as edema and erythema of the gingiva and usually has a history of trauma. Secondary osteomyelitis is a common sequelae in chronic infections. Dr. Bernstein feels it is mandatory to use systemic chemotherapy along with local debridement and topical antibiotics. He has found that Aureomycin in the drinking water (0.5gm/gal.) or chloromycetin (25mg/lb.) has been effective. Ascorbic acid at the rate of 10–30mg/day is also recommended.

Bacterial pneumonia is the primary disease of the respiratory system. *Pseudomonas* and *Aeromonas* are again the most common agents. Signs of pneumonia are anorexia, lethargy and bubbling from the mouth. Maintaining good nutrition, chloromycetin therapy and elevation of environmental temperature often give rewarding results.[1]

Parasitic Diseases

Parasitic diseases are common in reptiles. Many forms of external parasites infect reptiles, but the most common is the snake mite, *Ophionyssus*. These can transmit diseases and cause death by exsanguination. Shell No Pest Strips have been found to be very effective in eliminating the parasite.

Reptiles are also hosts to a variety of intestinal helminths which on a fecal flotation would resemble those of mammals and birds. Thiabendazole (20mg/lb.), Piperazine (40mg/lb.) and Dichlorvos (12.5 mg/lb.) daily for two doses are effective. For turtles, divide weight by 2.[1]

BIBLIOGRAPHY

1. Bernstein, Jon J.: A Clinical View of Some Reptilian Medical Problems, *Journal of Zoo Animal Mtdicine*, Vol. 3, no. 2, (June, 1972): 3–7.
2. Cowan, D. F.: Diseases of Captive Reptiles, *J.A.V.M.A.*, 153, (1969): 848–859.
3. Reichenbach-Klinke, H. and Elkan, E.: *The Principle Diseases of Lower Vertebrates*, New York, Academic Press, (1955): 385–543.
4. Wallach, J. D.: Medical Care of Reptiles, *J.A.V.M.A.*, 155, (1969): 1017–034.

What's Your Radiographic Diagnosis?

by

J. K. Kealy, M.V.M., M.R.C.V.S., D.V.R.*

D. W. DeYoung, D.V.M., Ph.D.†

History:

This bitch had an ovariohysterectomy at the Stange Memorial Clinic in December 1972 when she was 6 months old. She went home apparently normal. She was presented at the clinic on March 24th, 1973 because she was vomiting and depressed. She had been seen ingesting a leather glove and some hay. Radiographs made at this time showed an acute intestinal obstruction. On March 26th a piece of a sock was removed from the duodenum and a similar object was removed from the jejunum. The two pieces were joined by a length of yarn. Recovery from the surgery was uneventful and she was discharged from the clinic on March 29th. She was presented again at the clinic late on March 31st because she was again vomiting. As she did not appear to be unduly distressed, she was given symtomatic treatment on April 1st. On April 2nd a barium meal was given, and among others, the illustrated radiographs were made. What is your radiographic diagnosis?

* Dr. Kealy is an Associate Professor in the Department of Veterinary Clinical Sciences, Iowa State University.

† Dr. DeYoung is an Associate Professor in the Department of Veterinary Clinical Sciences, Iowa State University.