REOVIRUS OUTBREAK IN ARIZONA MOUNTAIN KING SNAKES (Lampropeltis pyromelana pyromelana)

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ABSTRACT

Reovirus, an unenveloped RNA virus, produces relatively nonpathogenic infections in animals. Disease in mice (hepatitis and encephalitis) and poultry (chronic respiratory disease and tenosynovitis) are the best known and described. Reoviruses isolated from reptiles are different from mammalian and avian isolates. Currently, the only specific disease recognized in reptiles is a fatal respiratory infection in Moellendorff’s ratsnakes (Elaphe moellendorffi) and beauty snakes (Elaphe taenuris).² Reovirus has been isolated from an emerald tree boa (Corallus caninus), an Aesculapian snake (Elaphe longissima), a ball python (Python regius), a rattlesnake (Crotalus viridis), a green iguana (Iguana iguana), green lizards (Lacerta viridis), and spiny-tailed iguanas (Ctenosaura sp.) without specific and consistent lesions of disease.¹,³,⁴

A group of six recently acquired, juvenile, captive-bred, Arizona mountain king snakes presented underweight and with regurgitation for several weeks. Fecal flotations and acid-fast stains did not reveal any parasites. One animal died and was submitted for necropsy. There was significant atrophy of coelomic cavity fat pads. Histologically, the significant lesions were acute necrotizing colitis and hepatitis with syncytial cell formation. Sections of the intestine and liver were processed for electron microscopy. Numerous viral particles were found in the cytoplasm of the intestinal epithelium and in hepatocytes. The morphology suggested either an adenovirus or a reovirus. The size of the particles was somewhat small for adenovirus (64 to74nm). No virus was seen in the cell nuclei, which is unusual for adenovirus, but is typical for a reovirus. The syncytial cell formation was also a feature in the respiratory infection of the ratsnakes.²

The remaining two sick animals in the group responded to supportive care including tube-feeding, intra-coelomic fluids, and ceftazidime injections.

LITERATURE CITED

