Strongyloidiasis in the Gibbon

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OBJECTIVE: The study was initiated to determine the incidence of Strongyloidiasis in the gibbon and to characterize the disease clinically and pathologically.

DESCRIPTION: A review of necropsy reports yielded 61 gibbons which died of natural causes between 1967 and 1970. Strongyloidiasis was the reported cause of death in 11 of these animals. Similarity of clinical history and lesions among these cases suggested that *Strongyloides stercoralis* in the gibbon caused a uniform syndrome with pathognomanic lesions.

PROGRESS:

A. Clinical history: With few exceptions, death was sudden with few prodromal signs of clinical disease.

B. Gross pathology: The most consistent finding was colitis varying from catarrhal to hemorrhagic. The lungs were generally described as red, congested, or hemorrhagic.

C. Histopathology: The principal lesions were present in the gastrointestinal tract with the most severe changes centered around the colon and distal portion of the small intestine. Here, numerous larvae penetrated the intestinal mucosa, some extending to the muscular wall disrupting intestinal glands and eliciting an inflammatory response which ranged from acute to granulomatous. Adult nematodes were generally present in the upper portion of the small intestine and pyloric portion of the stomach. Larvae were also present in other organs, the lungs being the most common site. Congestion and marked hemorrhage were the principal pulmonary changes, followed by foci of interstitial inflammation associated with migrating larvae. These pathological changes are very similar, if not identical, to those reported for the same disease in man. As in man, superinfection is the key factor in the gibbon disease. Although the nematode plays the major role in the disease, morphological and clinical evidence suggest that bacteremia and/or endotoxemia are the immediate cause of death in most animals.

SUMMARY: Strongyloidiasis, a common cause of death in the gibbon, is characterized by sudden death, entero—colitis, and pulmonary hemorrhage.