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NATURALLY OCCURRING HAEMONCHOSIS IN A WHITE-TAILED DEER*

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Abstract: Death of a white-tailed deer (*Odocoileus virginianus*) fawn was attributed to massive infection with *Haemonchus contortus*. Overcrowding, food shortage, and competition by cattle and hogs were contributing factors.

INTRODUCTION

Haemonchus contortus generally is regarded as a serious pathogen causing considerable blood loss in cattle and sheep. Effects in domestic livestock are well known, but only one account² is available on the pathogenicity of *H. contortus* for white-tailed deer. Naturally occurring fatal haemonchosis in a white-tailed deer is described herein.

A six-month old male fawn was found in a moribund condition in Long County, Georgia, during early March, 1966. Death occurred during transit to the laboratory for study.

POST-MORTEM FINDINGS

The animal was in obviously poor physical condition and the weight was estimated at less than 30 pounds. Pre-scapular, prefemoral and mesenteric lymph nodes were greatly enlarged and surrounded with gelatinous edema. This material similarly was observed in muscles and tendons near the joints of the extremities. Approximately one cup of straw-colored fluid was present in the abdominal cavity. Lesser quantities occurred in the thoracic cavity and in the pericardial sac. Tissues and organs were blanched in appearance, and thin, watery

blood exuded from cut surfaces. The bone marrow of the femurs was bright red and watery in consistency. Numerous small ulcers, 1-2 mm in diameter, were observed in the abomasum. The lungs were congested and hemorrhagic.

The abomasum contained 22,360 nematodes. There were 16,540 *H. contortus*, 304 *Ostertagia mossi*, 1,216 *Skrjabinagia odocoilei*, 2,160 *Trichostrongylus* sp. and 2,140 immature nematodes. Twenty-two mature *Dictyocaulus viviparus* were found in the air passages. Numerous first-stage protostrongylid larvae and a few *D. viviparus* larvae were present in scrapings from the trachea and bronchi. Fifteen *Setaria yehi* inhabited the abdominal cavity. Helminths were not found in other organs or tissues.

DISCUSSION

Pathogenicity has not been attributed to trichostrongyles naturally occurring in white-tailed deer¹ however Foreyt and Trainer² associated anemia, emaciation, and weakness with experimental infections of *H. contortus* in deer. Necropsy and parasitologic findings in this case were consistent with those associated with severe haemonchosis in domestic livestock and to those produced experi-

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mentally in deer. Although Foreyt and Trainer² did not attain experimentally the exceedingly high number of *H. contortus* observed in this case, they demonstrated that this helminth could reduce levels of hemoglobin and packed cell volume by 50 percent.

Other helminths found in this fawn undoubtedly contributed to its overall debilitated condition. Upon correlating the necropsy lesions with the large number of *H. contortus* however, it was concluded that this helminth was the primary cause of death.

Certain environmental factors probably assisted in producing this exceedingly

high parasite burden. Mast and browse-producing vegetation was located primarily in low-lying areas along streams and rivers in this coastal plains county. Scrub-oaks and pines were common on ridges and other upland terrain. A severe mast failure had occurred, and free-ranging cattle and feral hogs were in direct competition with deer for the greatly reduced food supply. Scattered mortality apparently had occurred throughout the area for the badly deteriorated carcass of an additional deer had been observed in the recent past. It is likely that severe haemonchosis was a by-product of over-crowding, food shortage, and competition by cattle and hogs.

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