Ascaridia galli Induced Ulcerative Ventriculitis in a Desi Chicken

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Abstract

A two months old Aseel cross-bred chicken was presented with the history of emaciation and sudden death. Numerous live Ascaridia galli worms were seen in the gizzard, small intestine and caecum. Multiple raised white areas in the gizzard mucosa, diffuse pale areas in the liver and clogging of the intestine with worms were also noticed. Histopathological examination revealed verminous ventriculitis, inflammatory changes in the intestine and liver. Cut sections of the parasite were confined to the muscularis of the gizzard and small intestine.

Key words: Desi chicken, Ascaridia galli, Ventriculitis

The present paper reports on the Ascaridia galli induced ulcerative ventriculitis in a desi chicken.

Materials and Methods

A two months old Aseel cross-bred chicken was submitted to the Department of Veterinary Pathology, Veterinary College and Research Institute, Tirunelveli - 627 358 for post mortem examination with the history of emaciation and sudden death. The chicken was subjected to detailed post mortem examination and the lesions were recorded. Tissue samples were collected and the paraffin embedded tissue sections were stained with Haematoxylin and Eosin (H & E).

Results and Discussion

External examination revealed rough skin, ruffled feathers and loss of feathers in the abdomen and dorsum. Internal examination revealed nematodes in the gizzard (Fig.1), small intestine and caecum. Thickened gizzard mucosa revealed multifocal irregularly circumscribed light white coloured depressed areas about 0.2 cm in diameter with raised borders.

The intestinal mucosa revealed petechial haemorrhages. Multifocal irregular pale areas were noticed on the parietal surface of the liver. The parasite was identified as Ascaridia galli based on the morphological characters as described by Soulsby (2012).

Histopathological examination of the gizzard mucosa revealed degeneration and necrosis with eosinophilic and lympho-plasmacytic infiltration. The lamina propria was infiltrated with eosinophils and lymphocytes. Ulcer was noticed on the mucosa of the gizzard. Muscularis of the gizzard revealed a cut section of Ascaridia galli worm which was surrounded by numerous eosinophils, lymphocytes and plasma cells (Fig.2). Intestinal mucosa revealed degeneration and necrosis associated with infiltration of eosinophils. The lesion extended into the lamina propria. A cut section of Ascaridia

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Adult *Ascaridia galli* are inhabitants of the lumen of the intestine. The gross changes caused by the parasite dependent on the parasitic load. In most of the cases, low worm load was observed and was not associated with any grossly observable lesions (Salam, 2015).

In the present case, cut section of the worm was seen in the muscularis of the gizzard and few worms were also present in the lumen of the gizzard. This clearly showed that larval stages might penetrate into the gizzard mucosa. The infection might have acquired by the ingestion of the intermediate host such as the earthworm.

**References**


**OBITUARY**

Prof. B. V. Rao

With deep sense of regrets, the Journal informs its esteemed reader veterinarians the demise of Prof. BadetiVenkateswara Rao popularly known as B V Rao an octogenarian and a renowned and dedicated Parasitologist on 27thFeb 2017 at Private Nursing Home in Tirupati, Andhra Pradesh. Dr. Rao completed his BVSc, MVSc and PhD from Madras Veterinary College. He was the teacher for the 1st batch students of Andhra Veterinary College. He served as Research Officer at IVRI, Izatnagar, Professor and Head of Parasitology and Principal of College of Veterinary Science, Tirupati and President of Indian Association for the Advancement of Veterinary Parasitology. He also worked as Professor at Medical College at Mosul, Iraq. He conducted ICAR Summer School and several conferences etc. Dr. B. V. Rao was awarded with State Best Teacher Award, Fellow of Indian Association for the Advancement of Veterinary Parasitology and Fellow of National Academy of Veterinary Sciences. Dr. Rao was authoritative on hydatidosis and published standard publications in Indian and International Journals of repute. Prof. B. V. Rao needs no special introduction to our readers and he is remembered for his attainments as evidenced by institution of a Gold Medal namely Prof. B. V. Rao Gold Medal for the best Parasitology research article published in The Indian Veterinary Journal.

The Editorial Board joins the readers in expressing the deep condolences to the grieved family.