

RESEARCH ARTICLE

TETRAMERES SP. (*Spiruridae*) FROM BACKYARD CHICKEN (*Galliformes: Phasianidae*) IN PUDUCHERRY - A FIRST REPORT

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ARTICLE DETAILS

ABSTRACT

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An adult desi backyard chicken with a history of dullness, depression, anorectic, diarrhoeic and death was brought for post mortem examination and on detailed examination revealed *Tetrameres* sp. (proventricular parasite) a fatal infection transmitted by ingesting intermediate host, either aquatic crustaceans or terrestrial insect and found embedded in proventricular serosa, feed on blood and produces haemorrhages, congestion, anaemia and death. This present paper communicates the parasitic presence and its control measures.

KEYWORDS

Tetrameres sp., Backyard chicken, Proventriculus, Puducherry.

1. INTRODUCTION

Poultry production in India has been constantly growing over the past decades and now poultry sector is treated as a vital constituent in country's rural developmental program and a major component of mixed farming. Backyard poultry farming is now emphasized to substantiate the income of small landholders of the rural area. Indigenous breed of fowls is preferred than exotic breeds due to their natural resistance to various pathogens [1]. However, certain gastrointestinal helminths are now becoming a potential threat for the fast-growing poultry industry. These pathogens result in severe economic losses due to high morbidity, mortality and decreases production [2,3]. *Tetrameres* species, a proventricular parasite infects poultry by ingesting the intermediate hosts like amphipods or terrestrial insect or isopod containing third stage larva but, not seems to be highly specific in use of intermediate host, female worms are deep red in colour, and found embedded in the gastric mucosa/glands and male worms are found free in lumen and usual nematode shape and occasionally reported [4-7].



Figure 1: Gross Pathology of proventriculus

2. MATERIALS AND METHODS

The examined proventricular worm were fixed in 70% ethanol and examined as temporary mounts on glass slide, later processed for species

identification by routine parasitological methods (borax carmine permanent staining method) [8]. The parasites were identified according to keys based on species characteristics and earlier literatures.

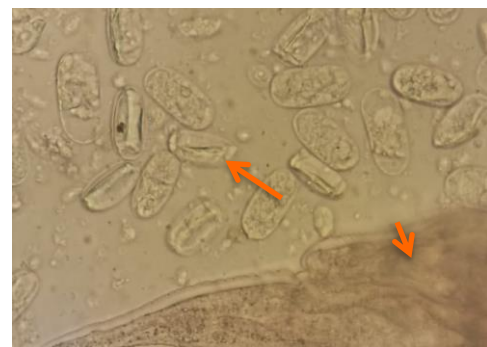


Figure 2: Embryonated eggs (40X)

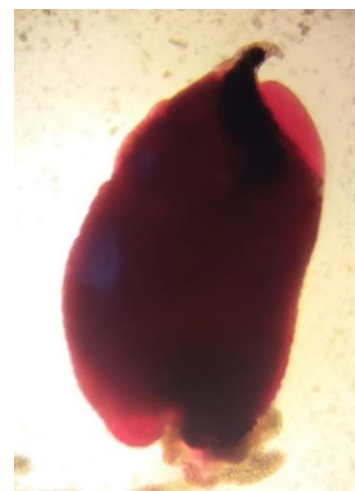


Figure 3: Microscopic View (40X)

3. RESULT AND DISCUSSION

Helminthes collected from the backyard poultry were processed and identified as *Tetrameres* species and on microscopical examination the central part of the body is globular or pear or spindle shaped with blood red in colour ranging 7mm long and 3.5mm wide, posterior and anterior ends called spicules, were thin and sharp. Infected proventriculus showed, areas of hemorrhages across the glandular epithelium, vascular congestion, fibrosis and necrosis of proventricular glandular structures. *Tetrameres* sp. embedded in the proventricular serosa is thus the most likely cause of death or which may constitutes a significant health hazard to the poultry due to scavenging habit in rural areas with little or no access to effective drugs and vaccines [9,10]. *Tetrameres* must have been acquired through feeding on the intermediate hosts from the ground where adult worms will develop in the proventriculus. The adult worm feed on the blood of the host and becomes engorged and gravid. This feeding habit could lead to severe hemorrhage, congestion, anemia and death in the infested bird [9,11].

4. CONCLUSION

We suggest that the importance of poultry population in rural economy as an diversifying agricultural production and its role in improving the income of many small and landless farmers need to be addressed and also to conduct further routine health treatment, epidemiological and pathological studies on *Tetrameres* species in near future.

CONFLICT OF INTEREST

No conflict of interest.

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