

Pulmonary fasciolosis in sheep due to *Fasciola gigantica**

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Abstract

An outbreak of mixed infection of *Fasciola gigantica* and *Dictyocaulus filaria* in lungs of Nilagiri sheep at Nilgiris hills, Tamil Nadu was investigated and reported.

Keywords: Mixed infection, *Fasciola gigantica*, *Dictyocaulus filaria*, Sheep.

Introduction

In India, outbreaks of pulmonary fasciolosis due to *Fasciola gigantica* in sheep have been reported from Uttar Pradesh (Katiyar and Tewari, 1982), Jammu and Kashmir (Pandit *et al.*, 1991) and Andhra Pradesh (Bhaskara Rao and Madhubala, 1998). Infection with *Dictyocaulus filaria* among sheep was reported by Bhatia and Pande (1960) in Uttar Pradesh and by Dhar *et al.* (1972) from Kashmir. This communication deals with an outbreak of mixed infection of *F. gigantica* and *D. filaria* in lungs of Nilagiri sheep at Nilgiris hills, Tamil Nadu.

Materials and Methods

Investigation was taken up to find out the cause of sudden death of 8 Nilagiri sheep in a flock of 151 at Karinmuli mund, Nilgiris district, Tamil Nadu between December 1998 and May 1999. Post-mortem examination was conducted on all 8 sheep that died during the period and relevant material was collected for examination (Soulsby, 1982).

Results and Discussion

On post-mortem examination, lungs were found inflamed with necrotic areas over left border and left apical lobe. Necrosed areas were swollen. Immature flukes were recovered from necrosed area while adult round worms were recovered from the bronchi, bronchioles and alveoli. Recovered flukes and round worms were identified as immature *F. gigantica* and adult *D. filaria*, respectively.

On post-mortem, liver was enlarged, haemorrhagic and friable and immature flukes were recovered from haemorrhagic tract and also in liver parenchyma. The gall bladder was distended with adult flukes. The flock was originally identified from an outbreak area for fasciolosis in liver due to *F. gigantica* (Soundararajan *et al.*, 2000).

The overall mortality was 5.3% (8/151). Out of 8 dead animals, 4 (50%) died due to immature *F. gigantica* in lungs. Two animals (25%) died due to mixed infection with immature *F. gigantica* and adult *D. filaria* in lungs. All the dead animals had immature *F. gigantica* in liver also and one animal had adult *F. gigantica* in gall bladder. This is in concurrence with that of Pandit *et al.* (1991) and Bhaskara Rao and Madhubala (1998) who reported isolated cases of *Fasciola* sp. infection with involvement of lung parenchyma. Dhar *et al.* (1972) reported *D. filaria* in lungs of sheep in Kashmir.

The number of immature *F. gigantica* and adult *D. filaria* recovered from lungs varied from 6-22 and 11-32, respectively while the number of flukes recovered from liver and gall bladder ranged from 42-52 and 3, respectively. The present paper represents a typical case of mixed infection of *F. gigantica* and *D. filaria* in lungs of Nilagiri sheep.

References

- Bhaskara Rao, P. and Madhubala, K., 1998. Outbreaks of fascioliasis in sheep with pulmonary involvement. Indian Vet. J., 75: 183-184.
- Bhatia, B.B. and Pandey, B.P., 1960. Studies on lung worms (Metastrongylidae Leiper, 1908) parasitising Indian livestock. 2. Observation on natural infection with species of *Dictyocaulus* Rillet and Henry 1907, and *Varestrongylus* Bhalero 1932, in sheep of hills in Uttar Pradesh. Proc. Natl. Acad. Sci. India, 30: 217-273.

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- Dhar, D.N., Tewari, H.C. and Rao, Y.V.B.G., 1972. Prevalence of lung worm infections sheep in Kashmir. *Indian J. Anim. Sci.*, 42: 112-114.
- Katiyar, R.D. and Tewari, H.C., 1962. Acute fascioliasis amongst sheep in Kumaon hills. *Indian Vet. J.*, 39: 382-386.
- Pandit, B.A., Mir, A.S. and Bandey, M., 1991. An unusual recovery of *Fasciola gigantica* in the lungs and duodenum of sheep. *Indian Vet. J.*, 68: 192.
- Soulsby, E.J.L., 1982. *Helminths, Arthropods and Protozoa of Domesticated Animals*. 7th Edn. Bailliere and Tindall, London.
- Soundararajan, C., Anil Kumar, R., Raman, M. and Iyue, M., 2000. Prevalence of fasciolosis in sheep in Nilgiris. *Indian J. Anim. Res.*, 34: 73-74.