Int. J. Adv. Res. Biol. Sci. (2016). 3(2): 269-271

International Journal of Advanced Research in Biological Sciences
ISSN: 2348-8069
www.ijarbs.com
Coden: IJARQG(USA)

Research Article

SOI: http://s-o-i.org/1.15/ijarbs-2016-3-2-36

Incidence of spontaneous lung lesions in slaughtered sheep

Amaravathi M*, K. Satheesh, P. Annapurna and K V Subramanyam

Department of Veterinary Pathology, N.T.R College of Veterinary Science,
Gannavaram – 521 102, Andhra Pradesh.
*Corresponding Author: *ammu.nihal@gmail.com*

Abstract

A study was conducted on 988 sheep in and around Vijayawada between June 2013 to July 2014 with an objective to determine the incidence of spontaneous lung lesions in slaughtered sheep and recorded several conditions like emphysema, atelectasis, congestion and haemorrhages, edema, pneumonia, pleuritis, hydatidosis, pulmonary fasciolosis, sheep pox, PPR and ovine pulmonary adenocarcinoma. The results are reported here under.

Keywords: Incidence; Lung lesions; Sheep; Andhra Pradesh.

Introduction

Productivity of an animal is determined by its health status. Various infectious and non - infectious agents can damage lungs and produce significant lesions in sheep. Timely diagnosis and management of sheep diseases are essential, otherwise disease outbreaks may occur and cause heavy economic losses. The success of sheep farming is mainly based on the efficiency in minimizing the mortality. A respiratory disease especially pneumonia inflicts heavy mortality especially in young animals and adversely affect the profit in sheep production (Srinivasan et al, 2003). Pneumonia is considered as the single largest cause of death in sheep. Although incidence of pulmonary lesions in sheep has been reported from other parts of the country but no systemic study has been carried out on ovine lung lesions in and around Vijayawada.

Materials and Methods

The present study was conducted at various slaughter houses located in and around Vijayawada and Tirupati apart from the animals necropsied in the Department of Veterinary Pathology, N.T.R College of Veterinary Science, Gannavaram and from field mortalities (Table-1) during the period of June 2013 – July 2014. During this period a total of 988 sheep were examined and their records formed a source of data for the current study. Lungs inspected during the study were used to establish the incidence of lung lesions affecting the sheep in Andhra Pradesh.

Results

A total of 988 sheep were examined for pulmonary lesions. Out of these, 187 lungs revealed definite lesions on gross and histopathological examination with an overall incidence of 18.93% (Table 2). The lesions recorded were broadly grouped as abnormalities of inflation in 22 (11.76%), circulatory disturbances in 37 (19.79%), inflammatory conditions in 116 (62.03%), parasitic conditions in 7 (3.74%), neoplastic conditions in 2 (1.07%) and miscellaneous conditions in 3 (1.61%) lungs that are depicted in Chart 1. The details of various predominant pathological lesions observed in sheep lungs are presented in (Table 3).

Table 1: Collection of samples

S.No	Sources for Sample collection	No. of samples
01	Slaughter houses located in and around Vijayawada and Tirupati	957
02	Post mortems conducted at Department of Veterinary Pathology, N.T.R College of Veterinary Science, Gannavaram	14
03	Field mortalities	17
TOTAL		988

Table 2: Incidence of lung lesions in sheep

S.No	Total No. of sheep lungs examined	No. of lungs with lesions (%)
01	988	187 (18.93%)

Table 3: Details of various predominant pathological lesions in sheep Lungs

S.No	Type of disease/ condition	Number	Percentage (%)
I	**Abnormalities of inflation**	**22**	**11.76**
	1.Pulmonary emphysema	17	9.09
	2.Atelectasis	5	2.67
II	**Circulatory disturbances**	**37**	**19.79**
	1.Pulmonary congestion and haemorrhage	19	10.16
	2.Pulmonary edema	18	9.63
III	**Inflammatory conditions**	**116**	**62.03**
	a. Types of pneumonia	**110**	**58.82**
	1.Bronchopneumonia	105	56.15
	(i) Suppurative bronchopneumonia	98	52.41
	(ii)Fibrinous bronchopneumonia	7	3.74
	2.Interstitial pneumonia	5	2.67
	b. Pleuritis	**6**	**3.21**
IV	**Parasitic conditions**	**07**	**3.74**
	1.Hydatidosis	01	0.53
	2.Pulmonary fasciolosis	06	3.21
V	**Neoplastic conditions**	**02**	**1.07**
	Ovine Pulmonary Adenocarcinoma	2	1.07
VI	**Miscellaneous conditions**	**03**	**1.61**
	1.Sheep pox	2	1.07
	2.Peste Des Petitis Ruminants (PPR)	1	0.54
	TOTAL	**187**	**100**

Discussion

Various studies on the incidence of pulmonary lesions in slaughtered sheep have been reported by earlier workers and the present incidence was in conformity with the earlier reports of Kumar et al., (2005) and Priyadarshi et al., (2013) with an incidence of 17.66% and 15.28% respectively. A higher incidence of lung lesions than the present study were noticed by Rahman and Iyer (1979), Chattopadhyay et al., (1986), Belkhiri et al., (2012), Dar et al., (2013a) and Belkhiri et al., (2014) whereas a lower incidence was reported by Kamil and Parihar (1990), Beytut et al., (2002) and Mellau et al., (2010) in sheep.

The percentage of lung lesions observed in the present study indicated that considerable number of sheep was affected by pulmonary lesions in the area under study. The variation in the incidence might be due to the influence of age, sex, breed, managemental practices and the difference in the environment in which the sheep were reared. Also, the present investigation included material from field mortalities and post mortems apart from slaughter house samples whereas most of the earlier reports were based on slaughter house samples alone and that might have also influenced the incidence observed in the present study.

Summary

The results observed in the present study revealed the spectrum of spontaneous lung lesions noticed in sheep of which the incidence of bronchopneumonia was found to be the highest.

References

1. Belkhiri, M., Tlidjane, M. and Meziane, T. 2012. Histopathological study of ovine pulmonary parasitic lesions. International Journal of Agri Science. Vol.2 (9): 854-859.
2. Belkhiri, M., Benhathat, Y. and Tlidjane, M. 2014. Classification and frequency of ovine pulmonary lesions in tiaret's slaughterhouse. Research Journal of Pharmaceutical, Biological and Chemical Sciences. Vol.5 (2): 1181-1188.
3. Beytut, E., Otlu, S. and Sozmen, M. 2002. Pathological and aetiological Investigations on ovine pneumonia in the region of Kars. Kafkas Universities Veterinary Faculties Dergisi, 8 (1):31-39.
4. Chattopadhyay, S. K., Ram Kumar, Kumar, P. N. and Vanamayya, P. R. 1986. Pulmonary affections in sheep: An etiopathological study. Indian journal of Comparative Microbiological Immunological Infectious Diseases. Vol. 7 (4): 182-184
5. Dar, L. M., Darzi, M. M., Mir, M. S., Kamil, S. A., Rashid, A. and Abdullah, S. 2013a. Prevalence of lung affections in sheep in northern temperate regions of India: A postmortem study. Small Ruminant Research. 110, 57-61.
6. Kamil, S. A. and Parihar, N. S. 1990. Prevalence of lung lesions of natural origin in sheep. Indian Journal of Animal Sciences. Vol.60, No.11:1319-1320.
7. Kumar, R. P., Ravi Kumar, Somawane, G. G, Paliwal, O. P. and Sharma, A. K. 2005. Studies on pathology of ovine pneumonias and experimental *Pasteurella multocida* infection in rabbits. Indian Journal of Veterinary Pathology. Volume 29, Issue 29: 153.
8. Mellau, L. S. B., Nonga, H. E. and Karimuribo. 2010. A slaughter house survey of lung lesions in slaughtered stocks at Arusha, Tanzania. Preventive Veterinary Medicine. 97: 77-82.
9. Priyadarshi, B.H, Joshi, D.V, Patel, B.J, Raval, S.H. and Patel, H.A 2013. Pathomorphology of spontaneously occurring pulmonary lesions in sheep (*Ovis aries*). Ruminant Science. Vol 2, No.1: 31-35.
10. Rahman, T. and Iyer, P. K. R. 1979. Studies on pathology of ovine pneumonias. Indian Veterinary Journal. 56: 455-461.
11. Srinivasan, P., Jyue, M. and Kumar, R. A. 2003. Bacteriological studies of ovine pneumonia in an organized farm. Indian Veterinary Journal. 80 (4): 311 – 313.

Access this Article in Online	
Quick Response Code	Website: www.ijarbs.com Subject: Veterinary Sciences

How to cite this article:
Amaravathi M, K. Satheesh, P. Annapurna and K V Subramanyam. (2016). Incidence of spontaneous lung lesions in slaughtered sheep. Int. J. Adv. Res. Biol. Sci. 3(2): 269-271.