

# The Pharma Innovation

ISSN (E): 2277- 7695

ISSN (P): 2349-8242

NAAS Rating: 5.03

TPI 2020; 9(1): 250-252

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www.thepharmajournal.com

Received: 18-11-2019

Accepted: 22-12-2019

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## Prevalence of pneumonia in goats in and around the Bidar

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### Abstract

The retrospective data pertaining to respiratory diseases in goats in and around the Bidar was collected from the Veterinary Clinical Complex, Veterinary College, Bidar from March 2015 to February 2017. A total 375 cases of respiratory diseases were recorded and among them 75 goats were suffering from pneumonia that rose to 20 per cent of prevalence of pneumonia in goats in and around the Bidar. Among the respiratory diseases prevalence of pneumonia was analyzed based on age-wise, sex-wise and season-wise in goats. The results revealed that, 0-6 months (48.00%) age group and female goats (72.00%) are more susceptible when compare to other group. This may be due to low immunity power in kids less than 6 months of age and female goats showed more susceptibility might be due to flock composition rather than sex predilection. Study on seasonal prevalence of pneumonia recorded highest in winter season (49.33%) due to stress induced by cold season that creates conducive atmosphere for survival and transmission organisms among susceptible goats.

**Keywords:** Respiratory disorders, pneumonia, prevalence, goats

### Introduction

In India, goat rearing is well integrated in traditional as well as farming system. Its smaller size, low cost, adapt to environmental condition and earning source for farmer through milk and meat referred as "poor man's cow". It became valuable assets to farmers and plays a pivotal role in the upliftment of their socio-economic status in society. However, many times the disease burden, morbidity and mortality push them on back foot due to financial loss affecting their economy.

Pneumonia is multifactorial disease affecting mainly goats. The attributable risk factors such as poor housing conditions, overcrowding, sudden environmental changes, transportation stress, weaning, inadequate access to colostrum, bacterial, viral infections, and other stressful conditions may precipitate the diseases. Prevalence study on pneumonia in goats based on age-wise, sex-wise and season-wise helps in understanding the epidemiology of pneumonia in goats and intern may aid's taking up prevention and control measures against pneumonia. Keeping these aspects in view the present study was undertaken to ascertain age-wise, sex-wise and season-wise prevalence of pneumonia in goats.

### Material and Method

The retrospective study was carried out in goats affected with respiratory diseases and data was collected from Veterinary Clinical Complex, Veterinary College, Bidar for the period of 2 years from March 2015 to February 2017. Among the respiratory diseases prevalence of pneumonia was analyzed based on age-wise, sex-wise and season-wise in goats in and around Bidar.

### Results and Discussion

The prevalence study was conducted in and around Bidar on respiratory diseases with special reference to pneumonia in goats. The information required was collected from Veterinary Clinical Complex (VCC), Veterinary College, Bidar from March 2015 to February 2017. During this study period, numbers of goats presented to clinics for various disorders of which 375 cases of respiratory disorders were recorded and among them 75 goats were suffering from pneumonia that rose to 20 per cent as overall prevalence of pneumonia in goats in and around Bidar. The Similar results were observed in the earlier studies conducted by Elaine *et al.* (2013)<sup>[3]</sup> and Emikpe *et al.* (2013)<sup>[4]</sup>. However, few studies showed higher or lower percentile prevalence when compared to present study viz., Poonia and Malik, (2012)<sup>[9]</sup> recorded 56.06 per cent whereas Karim and his co-workers (2014)<sup>[6]</sup> recorded lower prevalence of pneumonia (9.60%) in goats, this may be due various precipitating risk factors prevailing in that area or farm premises.

### Age-wise

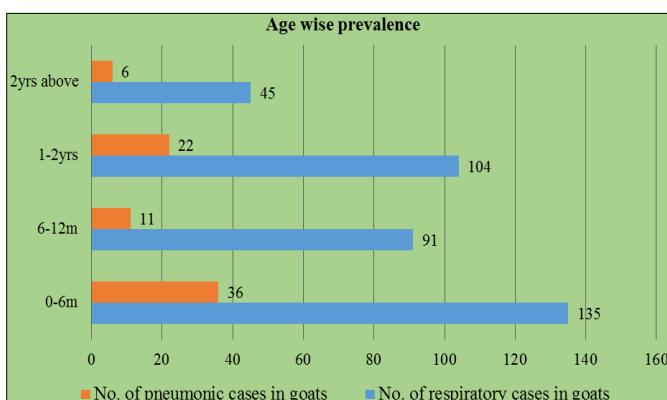
Age-wise prevalence of pneumonia in present study revealed highest prevalence in goats observed in 0-6 months 36 (48.00%) of age group followed by 1-2year age group 22 (29.33%), 2 years and above 6 (8.00%) and least in 6-12 months of age group 11 (14.67%). The result revealed that very young kids are highly susceptible for respiratory infection like pneumonia due to lack of immunity power. The similar results were also observed in the study of Sharma *et al.* (2007) [10], Sreedhar (2009) [11], Poonia and Malik (2012) [9], Dohare *et al.* (2013) [2], Momin *et al.* (2014), Alemneh and Tewodros (2016) [1].

### Sex-wise

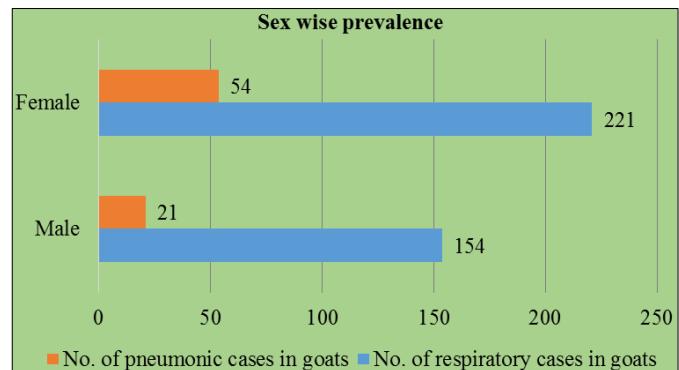
Sex-wise prevalence of pneumonia in female and male goats showed 54 (72.00%) and 21 (28.00%) respectively. The results revealed that higher prevalence of pneumonia occurs in female compare to male. This could be due to composition of flock rather than susceptibility of one sex for pneumonic condition in goats, since both the sex are equally susceptible to respiratory infections. The comparable results were observed by Elaine *et al.* (2013) [3] and Momin *et al.* (2014) and contradictory results were noticed, where in which higher prevalence of pneumonia in males (70%) when compared to female (30%) goats (Islam *et al.*, 2006; Sreedhar, 2009 [11] and Alemneh and Tewodros, 2016) [1].

### Season-wise

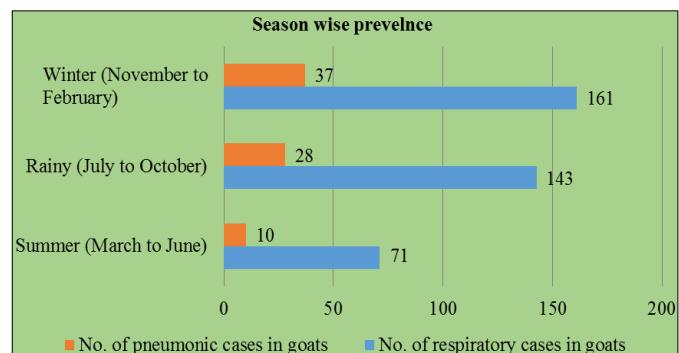
In the present study, seasons were classified as summer (March to June), rainy (July to October) and winter (November to February) and results revealed that higher prevalence of respiratory diseases recorded during winter (161: 42.93%) followed by rainy (143: 38.13%) and least in summer (71: 18.93%). Similar pattern was also recorded in season-wise prevalence of pneumonia, where winter season was found to precipitate higher prevalence of pneumonia in goats (37: 49.33%) followed by rainy (28: 37.33%) and summer (10: 13.33%). This may be due to cold stress that decrease in temperature is sufficient to inhibit defensive mechanism against infection including mucociliary clearance and leucocytic phagocytic activity in winter season (Lubis *et al.*, 2003) [7] and it was also hypothesized that in winter animals get crowded which will allow the bacterial infection to spread very fast from infected animal to susceptible animal. Similar results were also recorded by Momin *et al.* (2014) and Alemneh and Tewodros (2016) [1].



**Fig 1:** Age wise prevalence of pneumonia in goats, from March 2015 to February 2017



**Fig 2:** Sex wise prevalence of pneumonia in goats from March 2015 to February 2017



**Fig 3:** Season wise prevalence of pneumonia in goats from March 2015 to February 2017

### Conclusion

In the retrospective study, overall prevalence of pneumonia in goats was 20.00 per cent with higher prevalence in winter season, female goats and 0-6 months of age groups when compared to other groups.

Hence, the results from the present study indicated that pneumonia is of multifactorial in origin and interplay between host agent and environment play a pivotal role in prevalence of pneumonia in goats.

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