

SERO-PREVALENCE OF LEPTOSPIROSIS IN SMALL RUMINANTS IN VIRUDHUNAGAR DISTRICT OF TAMIL NADU

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Leptospirosis has been recognised as a widespread zoonotic disease affecting all mammals. The disease is of considerable economic importance in livestock due to manifestations like jaundice, abortion, infertility and decreased production. In India, the prevalence of leptospirosis in farm animals in many states has been reported by earlier workers (Ajay Velma *et al.*, 2001; Sivaseelan *et al.*, 2003; G.Balakrishnan *et al.*, 2008). Generally, this disease manifests itself as an inapparent or sub-clinical state and most often goes undiagnosed. The present investigation was undertaken to assess the sero-prevalence of leptospirosis in sheep and goats in Virudhunagar district of Tamil Nadu.

A total of seven hundred and sixty eight sera samples were collected randomly from apparently healthy sheep and goats from farmer's holdings and slaughter houses in Virudhunagar district of Tamil Nadu over a period of 12 months from July 2000 to June 2001. These included 151 sheep and 617 goats. The serum samples were sent to Central University Laboratory, Tamil Nadu Veterinary and Animal Sciences University, Chennai, for analysis. All the samples were subjected to Microscopic Agglutination Test (MAT) for the presence of leptospiral antibodies as per the method suggested by Faine (1982).

Seventy three (9.51%) had significant MA titre among the total 768 sera samples tested. The overall sero prevalence of leptospirosis among sheep and goats was 9.95 per cent and 9.40 per cent, respectively.

In goats, the prevalence of serovar pomona was 2.11% followed by hardjo (1.78%), grippotyphosa (1.30%), canicola (1.13%), autumnalis, australis (0.97%), hebdomadis (0.81%) and icterohaemorrhagica (0.32%), whereas in sheep the order of incidence was pomona (2.65%), grippotyphosa, australis (1.99%), canicola (1.32%), icterohaemorrhagica, autumnalis (0.66%).

The serovar hebdomadis identified in goats had no prevalence in sheep. Similar prevalence of leptospiral serovars in sheep and goat was registered by Sivaseelan *et al.* (2005). The most common and predominant serovar encountered both in sheep and goat was pomona which correlates with the observations recorded by Natarajaseenivasan and Ratnam (1997) and Balakrishnan *et al.* (2008).

The variation in the presence of serovars might be due to their habitation and no species specificity could be observed in their distribution. Presence of leptospiral antibodies in the sera samples of sheep and goats in this study indicated the prevalence of

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explained by the earlier report on leptospires in sheep and goats of the adjoining Madurai district by Sivaseelan *et al.* (2003).

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