PESTE DES PETITS RUMINANTS (PPR) OUTBREAK IN SHEEP AND GOATS IN MAHARASHTRA: LABORATORY CONFIRMATION BY S-ELISA (MUKTESHWAR) AND VERO CELL CULTURE

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ABSTRACT

Peste Des Petits Ruminants (PPR) is a highly contagious viral infection of small ruminants. There have been large numbers of outbreaks of the disease in sheep and goats in various states in India. The disease causes economic disaster, due to high casualty both in young and adults. A tentative diagnosis of PPR can be proffered on the basis of clinical signs, but laboratory confirmation is required for differentiation from diseases like rinderpest with analogous symptoms. This paper discusses the use of s-ELISA (PPR s-ELISA kit developed by IVRI, Mukteshwar) and culture of the virus on Vero cell lines for laboratory confirmation in a PPR outbreak in sheep and goats in Maharashtra, India during September to December 2007. The investigation was carried out on 256 specimens, comprising clinical samples (blood, nasal swabs, and anal swabs) and morbid specimens (spleen, lung, mesenteric lymph node, and intestine) of the animals collected during the outbreak. The presence of PPR antigen was positive in 69.39% of the samples in goats and 66.66% in sheep. The difference between the two species was non-significant (P≥0.05) indicating that both the species were evenly at risk to PPR. The diagnostic value of mesenteric lymph node was the highest (100%), followed by spleen (85.71%), and blood (82.97%). PPR viruses, isolated from spleen samples from three independent sources, and inoculated in Vero cell lines were designated as I-1, I-2, and I-3 as per the source of virus. This study implied that sero-monitoring of the PPR antibodies would be helpful in effective formulation of PPR control strategies in the state.

KEY WORDS

Goat, Sheep, S-ELISA, Peste Des Petits Ruminants, Vero cell

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