Abstract
A 5 month old goat was presented to Referral Veterinary Polyclinics and Teaching Veterinary Clinical Complex, Indian Veterinary Research Institute (IVRI), Izatnagar, with the presenting complaint of being off-feed, depressed, diarrhoeic and ocu-o-nasal discharge. Clinical examination revealed pyrexia- 104.5 °F, salivation, congested mucous membrane, ulcerated lesions on oral cavity, dehydration and mucopurulent nasal discharge. Confirmatory diagnosis was made by molecular technique RT-PCR. In this case study therapeutic management of PPR was done with appropriate antibiotic and supportive care.

Keywords: PPR, goat, RT- PCR, therapy

1. Introduction
Peste des Petits Ruminants (PPR) is an infectious, highly contagious viral disease affecting sheep, goats and wild ruminants with high mortality rate. The ailment is transboundary animal disease and is one of the top ten diseases of small ruminants [1]. The other regional vernacular names of the disease are “Kata”, “pseudo rinderpest”, “syndrome of stomatitis pneumonia enteritis” and “pneumo enteritis complex” [2]. The incubation period of the disease is 3-6 days. Clinically, the disease is characterized by fever, mucopurulent ocular and nasal discharges, necrotizing and erosive stomatitis, severe enteritis and pneumonia leading to death [3]. The disease is of heavy economic significance in small ruminant industry [4]. Infection of small ruminants with PPRV causes a devastating plague and as well as being endemic across the developing world. In present scenario, PPR is enzootic in India and outbreaks tend to occur frequently among small ruminants throughout the country, inflicting significant economic loss in terms of morbidity, mortality and loss of productivity due to trade [5]. Even though vaccination is available against PPR, it’s however received the coverage that it needs. However, supportive therapy in the form of rehydration through infusion of fluids, antibiotic therapy combined with anti-histaminic has been to a great extent fruitful in the control of the disease [6]. Virus can be detected through number of diagnostic techniques including competitive and sandwich ELISA, virus neutralization test, agar gel immunodiffusion test, haemagglutination test, RT-PCR, and LAMP Assay [7,8]. In this paper, attempt has been made to reveal insight into a portion of the clinical signs, diagnosis and effective therapeutic measures.

2. Materials and Methods
A case study: A 5-month old goat of non-descriptive breed was brought to the Referral Veterinary Polyclinic and Teaching Veterinary Clinical Complex, Indian Veterinary Research Institute (IVRI), Izatnagar India with the presenting complaint of being off-fed, depressed, diarrhoeic, and ocu-o-nasal discharge. The animal was not immunized according to the information obtained from the owner. Clinical examination revealed pyrexia- 104.5 °F, salivation, reluctance to move, matted eyes, congested mucous membrane, ulcerated lesions on oral cavity, droopy head, dehydration and mucopurulent nasal discharge (Fig. 1 and 2). Heart rate and respiratory rate were within the normal range. Based on clinical signs the disease was tentatively diagnosed as PPR. The disease needs to be differentially diagnosed from foot and mouth and blue tongue diseases due to similarities in clinical signs. In the present case for confirmatory diagnosis the blood, faecal sample and oro-nasal swab, were sent to CADRAD unit of Indian Veterinary Research Institute, Izatnagar. The sample was subjected to RT-PCR for confirmatory diagnosis.
3. Results and Discussion
In the present study, RT-PCR technique used for the diagnosis of PPR virus based on amplification of part of N gene. Diagnosis on the basis of genomic detection can be done by RT-PCR, and LAMP Assay [9]. RT-PCR test can be used as routine diagnostic tool for PPR diagnosis, which has good correlation with virus isolation [10]. PCR in combination with nucleotide sequencing has made it method of choice for molecular characterization of viruses [11]. In the present study sample was positive for RT PCR for the size of 351 bp (Fig. 3). Haematological examination revealed, Haemoglobin-10 g/dl, TLC-15,000 /cmm, TEC-5.6 x 10⁶/µl and PCV-45%. Blood sample and faecal sample were negative for haemoprotozoa and endoparasites respectively.

4. Conclusion
In this study, tentative diagnosis of PPR was done by history and clinical sign. However RT PCR technique was used for confirmatory diagnosis which has good correlation with PPR virus isolation in specimens from affected animals. There is no established treatment protocol for PPR, as the disease is caused by a virus but it can be treated using antibiotics and other supportive therapy.

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6. Reference


