**Chapter six**

**REFFERENCES**

Abdalla, S A, Majok A A E l, Malik K H, Ali A S. 2012. Sero-prevalence of peste des petits ruminants virus (PPRV) in small ruminants in Blue Nile, Gadaref and North Kordofan States of Sudan. Journal of Public Health and Epidemiology, 4(3): 59-64.

Albina, E, Kwiatek O, Minet C C, Lancelot R, Almeida R S, Libeau G. 2012. Peste des petits ruminants, the next eradicated animal disease, State of the art in diagnosis and control strategies : journal home page: www.elsevier.co m/lo cat e/vetmic*,* Pp: 3

Anil, K K, Nalini K, Ajey K G. 2007. Large scale outbreaks of peste des petits ruminanants (PPR) in sheep and goats in Thar desert of India. Slov vet Res, 44(4): 123-132.

Abraham, G, Sintayehu A, Libeau G, Albina E, Roger F, Laekemariam Y, Abayneh D, Awoke K M. 2005. Antibody seroprevalence against PPR in camels, cattle, goats, and sheep in Ethiopia. Prevention of Veterinary medicine, 70: 51–57.

Ahmed, K, Jamal S M, Ali Q, Hussain M. 2005. An outbreak of peste des petits ruminanants virus (PPRV) in goat flock in Okara ,Pakistan. Pakistan Veterinary Journal, 25: 146-148.

Abu Elzein, E M E, Housawi F M T, Bashareek Y, Gameel A A, Al- Afaleq A I, Anderson E C. 2004. Severe PPR infection in Gazelles kept under semi-free range conditions in Saudi Arabia*.* Journal of veterinary Microbiology,51 (2): 68–71.

Aderemi, F A. 2004.Effects of replacement of wheat bran with cassava root sievi supplemented or unsupplemented with enzyme on the haematology and serum biochemistry of pullet chicks. Tropical Journal of Animal Science, **7**(1): 147-153.

Aruni, A W , Latha P S, Mahan A C, Chiltravelu P, Ambumain S P. 1998. Histopathological study of a natural outbreak of peste des petits ruminants in goats of Tamil Nadu. Small Ruminant Research, 28: 233-240.

Ahmed, N U, Mostofa M, Awal M, Awal A, Alam M N. 1994. Comparative efficacy of modern anthelmintics with that of neem seeds against gastrointestinal nematodiasis in sheep. Bangladesh Veterinary Journal, 28: 21-23.

Anderson, E C, Hassan A, Barrett T , Anderson J. 1990. Observation on the pathogenicity for sheep and goats and the transmissibility of the strain of virus isolated during the rinderpest outbreak in Sri Lanka in 1987. Veterinary Microbiology, 21: 309-318.

Appel, M J G, Gibbs E P J, Martin S J, Ter Meulen, V Rima, B. K., Stephenson J R, Taylor W P. 1981. Morbillivirus Diseases of Animals and Man. In Comparative Diagnosis of Viral Diseases IV, E. Kurstak and C. Kurstak, eds. New York: Acad. Press, Pp: 235-297.

Bao, J, Wang Q, Parida S, Liu C, Zhang L, Zhao W, Wang Z. 2012. Complete Genome Sequence of a Peste des Petits Ruminants Virus Recovered from Wild Bharal in Tibet, China. Journal of Virology,86(19): 10885.

Banyard, A C, Parida S, Batten C, Oura C, Kwaitek O, Libeau G. 2010.Global distribution of peste des petits ruminants virus and prospects for improved diagnosis and control. J. Gen. Virol., 91: 2885–2897.

Banik, S C, Podder S C, Samad M A, Islam M T. 2008. Sero surveillance and immunization in sheep and goats against Peste des Petits Ruminants in Bangladesh.Bangladesh Journal of Veterinary Medicine, 6 (2): 185–190.

Banik, S C, Podder S C, Samad M A, Islam M T. 2008. Sero surveillance and immunization in sheep and goats against Peste des Petits Ruminants in Bangladesh.Bangladesh Journal of Veterinary Medicine, 6 (2): 188.

Babatunde, G M, Fajimi A O, Oyejide A O. 1992. Rubber seed oil versus palm oil in broiler

chickens diet. Effect of performance, nutrient digestibility, haematology and carcasss characteristics. Animal Feed Science Technology, 35: 133-146.

Bhikane, A U, Kulkarni D D, Narladkar B W, Ali M S. 1997. Clinico-pathological and therapeutic investigations on peste des petits ruminants in goats. Indian Veterinary Journal, 74: 377-9.

Bundza, A, Afshar A, Dukes T W, Myers D J, Dulac Susi G, Becker A W E. 1988. Experimental PPR (goat plague) in Goats and sheep. Canadian Journal of Veterinary Research, 52: 46-52.

Braide, V B. 1981. Peste des petits ruminants. World animal Review, 39: 25-28.

Chauhan, H C, Chandel B S, Kher H N, Dadawala A I, Agrawal S M. 2009. Peste des petits ruminants virus infection in animals. Veterinary World*,* 2 (4):150-155.

Couacy-Hymann, E R F, Bidjeh K, Angba A, Domenech J, Diallo A. 1995. Protection of goats against rinderpest by vaccination with attenuated peste des petits ruminants virus. Research of veterinary Science, 59: 106-109.

Church, J P, Judd J T, Young C W, Kelsag J L, Djum W W. 1984. Relationship among dietary constituent and specific serum clinical components of subjects eating self- selected diets. Anim. J. Clin. Nutri. 40: 1338-1340.

Das, K K, Shil N K, Islam M R. 2007. Sero-epidemiological investigation on Peste des Petits Ruminants in black Bengal goats. Bangladesh Journal of Microbiology, 24 : 143 – 145.

Dhand, N K, Sharma C S, Sandhu K S, Sharma D R, Singh J. 2002. Outbreaks of peste

des petits ruminants (PPR) in Punjab. Indian journal of Animal Sciences, 72 (10): 853-854.

Debnath, N C. 1995. Peste des petits ruminants (PPR); an overview proceeding of the BSVER Symposium on Eradication of Rinderpest and Related Diseases.2nd December, 1995, Dhaka; 9-13.

Durojaiye, O A. 1980. Brief notes on history, epizootiology and the economic importance of PPR in Nigeria. In: Proceedings of the International Workshop on Peste des Petits Ruminants, IITA, Ibadan, Nigeria, 24-26 September, Pp: 24-27.

Dewan, M L, Hossain M I, Baki M A. 1979. Pathological investigation on the mortality of buffalo calves of Bangladesh. Bangladesh veterinary Journal, 13: 1-7.

Durtnell, D R. 1972. A disease of sokoto goats resembling "peste des petits ruminants". Tropical Animal Health Production, 4: 162-164.

EMPERS (Emergency Prevention System for Transboundary Animal and Plant Pests and diseases). Recognizing peste des petits ruminants. A field manual. Rome, Italy: FAO (Food and Agricultural Organization of United Nation, 1999)

Fraser, C M. 1986. PPR. The Merck Veterinary Manual. 6th edition, Merck and co. Inc. U.S.A; 402-403.

Furley, C W, Taylor W P, Obi T U. 1987. An outbreak of peste des petits ruminants in a zoological collection.Veterinary Record, 12: 443–447.

Gupta, S D, Biswas P, Habib S, Debnath N C. 2007. Prevalence of PPR in the greater Chittagong district of Bangladesh. g-science, 3 (2): 36-41

Gibbs, E P J, Taylor W P, Lawman M J P. 1979. Classification of Peste des petits ruminants (PPR) virus as the fourth member of the genus Morbilivirus Intervirology, 15: 35-41.

Harshad, C C, Padaranga S L, Kumar p, Sandeep S P. 2011. The use of pathological techniques in the diagnosis of peste des petits ruminanants (PPR) in India. Veterinaria Italina, 47(1): 41-47.

Hassan, M M, Hoque M A, Islam S K M A, Khan S A, Roy K, Banu Q. 2011. A prevalence of parasites in black bengal goats in Chittagong, Bangladesh. International Journal of Livestock Production, 2(4): 40-41.

Hossain, M J, Amin M, Mostofa M, Sharif M, Khalid S M A. 2004. Efficacy of levanid against natural gastrointestinal nematodiasis and paramphistomiasis in sheep. The Banglades Veterinarian, 21 (2): 70-73.

Heaney J, Barrett T, Cosby S L. 2002. Inhibition of in vitro leukocyte proliferation by morbilliviruses. Journal of Virology, 76: 3579-84.

Hussain, M, Afzal M, Muneer R, Ashfaq M, Haq E U. 1998. An outbreak of peste des petits ruminants in goats in Rawalpindi. Pakistan Veterinary Journal,18: 224–226.

Hamdy, F M, Dardiri A H. 1976. Response of white tailed deer to infection with peste des petits ruminants virus. Journal of Wildlife Diseases, 1: 516-522.

Islam, M S, Khan M S I, Kader H A, Begum M R, Asgars M A. 2012. Prevalence of PPR of Goat and Their Response to Antibiotic Treatment at Mirzaganj Upazila of Patuakhali Distrtict. Journal of Environmental Science and Natural sources, 5(2): 181 – 184.

Iman, N, Mesam P K, Omid M. 2012. Survey on PPR in Small Ruminants. Annals of Biological Research, 3(10): 4842-4844.

Islam, M R, Shamsuddin M, Das P M, Dewan M L. 2001. An outbreak of Peste des Petits Ruminants ( PPR ) in Black Bengal goats in Mymensingh, Bangladesh. The Bangladesh Veterinarian, 18 : 14 – 19.

Jugessur, V S, Ramjee R, Ramnauth R K. 1998. The effectiveness of some widely used anthelmintic drugs on endoparasitic nematodes of village goats. Food and Agricultural Research Council, Reduit Mauritius, pp. 32-38.

Kashem, M A, Hossain M A, Ahmed S S U, Halim M A. 2011. Prevalence of diseases, morbidity and mortality of Black Bengal Goats under different management systems in Bangladesh. Rajshahi University Zoological Society, 30: 1-4.

Kwiatek, O, Ali Y H, Saeed I K, Khalafalla A , Mohamed O I, Obeida A A, Abdelrahman M B., Osman H M.,Taha K M., Abbas Z, Lhor Y, Diallo A, Lancelot R., Albina E, Libeau G. 2011 .Asian lineage of peste des petits ruminants virus, African Emerging Infectious Diseases,17: 1223–1231.

Khan, M R, Haider M G, Alam K J, Hossain M G, Chowdhury S M Z H, Hossain M M. 2005. Bangladesh Journal of Veterinary medicine, 3(2): 134-138.

Kataria, N, Kataria A K. 2004. Use of blood analytes in assessment of stress due to drought in camel. Journal of Camel Practical Research., 11: 129-33.

Kumar, P, Tripath B N, Sharma A K, Kuma R, Sreenivas B P, Singh P, Dhar P. 2004. Pathological and Immunohistochemical study of experimental peste des petits ruminants virus infection in goats. Journal of Veterinary Medicine, 8: 153-159

Kumar, P, Tripathi B N, Sharma 1 A K, Kumar R, Sreenivasa B P., Singh P, Dhar P, Bandyopadhyay S K. 2004. Pathological and Immunohistochemical Study of Experimental Peste Des Petits Ruminants Virus Infection in Goats. Bangladesh Journal of Veterinary Medicine, 51: 153–159.

Kumar, A, Singh S V, Rana R, Vaid R K, Misri J, Vihan V S. 2001. PPR outbreak in goats: epidemiological and therapeutic study. Indian Journal of Animal Sciences, 71 (9): 815-812.

Kaneko, J, Harvey J Bruss M. 1997. Clinical Biochem of Domestic Animals. 5th Ed. Academic Press, New York. Pp: 932.

Kerr, G R, Lee E S, Lam E K, Lorimor R J, Randall E, Forthofer R N, Davis M A, MagnettismA. 1982. Relationships between dietary and biochemical measures of nutritional status. Am. J. Clin. Nutri.; 35: 294-308.

Kwiatek O, Minet C, Grillet C, Hurard C, Carlsson E. 2007. PPR outbreaks in Tajikistan. J comp pathol, 13: 111-119.

Lefevre, P C, Diallo A., Schenkel F, Hussein S Staak G. 1991. Serological evidence of peste des petits ruminants in Jordan. Veterinary Research, 128: 110.

Lefevre, P C, Diallo A. 1990. Peste des petits ruminants. Rev. sci. tech. Off. int. Epiz., 9: 951–965.

Mahajan, S, Agrawal R, Kumar M, Mohan A , Pande N . 2013. Incidence of Peste des petits ruminants in nomadic sheep and goat of Jammu region, Vet World 6(7):384-387, doi:10.5455/vetworld.2013.384-387.

Mulindwa, B, Ruhweza S P, Ayebazibwe C, Mwiine F N, Muhanguzi D, Mukani W O. 2011. Peste des Petits Ruminants serological survey in Karamoja sub region of Uganda by competitive ELISA. Veterinary World*,* 4(4): 149-152.

Mirza, A K, Nasir H, Sher B, Imtiaz, A. 2008. An Outbreak Of peste des petits ruminanants (PPR) in goats in district Chaitral, N.W.F.P., Pakistan. Journal of Agricultural and Biological Science, 3(2); 5-12.

Nooruddin, M, Baki A, Das J G. 1987. Clinico-pathological studies of an outbreak of Trichuris in cow calves. Indian Journal of Veterinary Medicine, 7: 116-119.

Osman, N A. 2005. Peste des petits ruminants in Sudan: Detection, virus isolation and identification, pathogenicity and serosurveilance. Thesis for master degree, University of Khartoum, Sudan.

Ozkul, A, Akcay, Alkan F, Barrett T, Karaglu T, Dagalps S B, Anderson J, Yesilbag K, Cokcaliskan C, Gencay A, Burgu I. 2002. Prevalence, distribution, and host range of Peste des petits ruminants virus in Turkey. Emerging Infectious Diseases, 8: 708–712.

OIE (Office International des Epizooties/World Organization for Animal Health) (2000) Peste des petits ruminants. In: Manual of standards for diagnostic tests and vaccines. Ed 4. Chap 2.1.5. Paris: OIE, 2000.

Obi, T U, Ojo M O, Durojaiye O A, Kasali O B, Akpavie S, Opasina D B. 1983. Peste des Petits Ruminants (PPR) in Goats in Nigeria: Clinical, Microbiological and Pathological Features. Zentralblatt für Veterinrmedizin Reihe B, 30: 751–761.

Prushothaman, V, Hemalatha S, Ravikumar G, Govindarajan R, Sundar N, Kotteswaran A. 2006. An outbreak of peste des petits ruminants in small ruminants. Indian Veterinary Journal, 83: 133-136.

Pawaiya, R V S, Mistra N, Bhagwan P S K, Bubey S C. 2004. Pathology and distribution of antigen in goats naturally infected with PPR virus. Indian Journal of Animal Sciences, 74: 35-40.

Perl, S, Alexander A, Yakobson B, Nyska A, Harmelin A, Sheikhat N, Sihmshony A., Davidson N, Abramson M, Rapoport E. 1994. Peste des petits ruminants (PPR) of sheep in Israel: case report. Israel Journal of veterinary Medicine*,* 49: 59–62.

Rahman, M A, Shadmin I, Noor M, Parvin R, Chowdhury E H, Islam M R .2011. Peste des petits ruminants virus infection of goats in Bangladesh: Pathological investigation, molecular detection and isolation of the virus. The Bangladesh Veterinarian, 28(1) : 1 – 7.

Rahman, M M, Bhuiyan A R, Parvin R, Giasuddin M, Haque M E, Sayem S, Islam M R, Chowdhury E H. 2011. Immune response of goats to thermostable PPR vaccine in Bangladesh.SAARC Journal of Agriculture, 9 (2) : 73-81.

Radostits, O M, Gay C C, Blood D C, Hinchcliff K W. 2005. Diseases caused by viruses and Chlamydia, Veterinary Medicine, 9th ed. W. B. Saunders Company Ltd. London. Pp: 12-14.

Razzaque, M A, Rahman M B, Kafi M A, Islam M R, Khan M F R, Nazir K A M N H. 2004. Application of C-ELISA for detection of PPRV-specific antibodies in domestic ruminants in different areas of Mymensingh, Bangladesh. Molecular Biology and Biotechnology Journal, 2 : 40 – 43.

Radostits, O. M., Gay, C. C., Blood, D. C., Hinchcliff, K. W. (2000) Veterinary medicine: A text book of the disease of cattle, sheep, pigs, goats and horses.10th edition. Bailliere Tindall, Great Britain.

Roeder, P , Abraham G, Kenf G, Barrett T. 1994. Peste des petits ruminants in Ethiopian goats. Tropical Animal Health Production, 26 (2): 69-73*.*

Sarker, S, Islam M H. 2011. Prevalence and Risk Factor Assessment of Peste des petits ruminants in Goats in Rajshahi, Bangladesh. Veterinary World, 4(12): 546-549.

Swai, E S, Kapaga A, Kivaria F, Tinuga D, Joshua G , Sanka P. 2009. Prevalence and distribution of peste des petits ruminants virus antibodies in various districts of Tanzania. Veterinary Research Community, 33: 927–936.

Singh, R K, Balamurugan V, Bhanuprakash V, Sen A, Saravanan P, Pal Yadav M. 2009. Possible control and eradication of peste des petits ruminants from India: technical aspects. Veterinaria Italina, 45(3): 449-62.

Samad M A. 2008. Animal Husbandry and Veterinary Science.Volume 2, 1st Pub., LEP No. 12, BAU Campus, Mymensingh, Bangladesh.

Saliki, J T, Wohlsein P. 2008. Peste des petits ruminants. In: US Animal Health Association, Committee on Foreign Animal Disease. Foreign animal diseases: the gray book. Ed 7. Part III, chap 36. Richmond, VA: US Animal Health Association, 2008: 357-64.

Sil, B K, Taimur M J F A, Giasuddin M. 2006. Combined Antibiotic Hyper Immune Serum Therapy (ACHST) for PPR. A Compendium of Livestock Technologies developed by Bangladesh Livestock Research Institute. BLRI publication No. 130. pp. 65.

Singh, R P, Saravanan P, Sreenivasa B P, Singh R K, Bandyopadhyay S K. 2004. Prevalence and distribution of peste des petits ruminants (PPR) virus infection in small ruminants of India. Rev sci tech Off int Epiz, 23: 807–819.

Samad, M A. 2000. Poshu Palon O Chikitsavidya (Animal Husbandry and Medicine). 2nd Edn., Published by M. Bulbul, Bangladesh Agricultural University campus,Mymenshingh, Bangladesh.

Scott, G R. (2000). Peste des petits ruminants and rinderpest. In: Martin W. B., and I. Aitken (ed), Diseases of Sheep, 3rd edn, pp. 398. Blackwell Publishing, Oxford, UK.

Shaila, M S, Shamaki D, Forsyth M A, Diallo A, Goatley L, Kitching R P, Barrett T. 1996 Geographic distribution and epidemiology of peste des petits ruminants virus. Virus Research, 43 (2): 149-53.

Speedy, A W. 1992. Progress in sheep and goat research, C.A.B.International, Wallingford, Oxon, U.K, pp.179-188.

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| --- |
| Shaila, M S, Purushothaman V, Bhasavar D, Venugopal K, Venkatesan R A. 1989. Peste des petits ruminants in India. Veterinary record, 125: 602. |

Scott, G R. (1981). Rinderpest and peste des petits ruminants. In : Gibbs, E.P.J. (Ed.). Virus Diseases of Food Animals, Vol.II, Disease monographs. Academic Press, New York. Pp: 401-425.

Sobhan, M A, Maleque M A, Ahmed S U. 1976. A Comparative Study of Anthelmentic activity of Tetramisole, Thiobendazole and Rametin on lambs. Bangladesh veterinary Journal, 10(1-2): 1-5.

Tiwari, A. 2004. Prevalence of Peste des petits ruminants (PPR) virus in small ruminants of Gujarat and its characterization by RT-PCR/ RFLP and SSCP profiles. M.V.Sc. thesis, Anand Agricultural University, Anand, India.

Taylor, W P, Albusaidy S, Barreett T. 1990. The epidemiology of peste des petits ruminants in the Sultanate of Oman. Veterinary Microbiology*,* 22: 341–352.

Taylor, W P. 1984. The distribution and epidemiology of peste des petits ruminants. Preventive Veterinary Medicine, 2: 157-166.

Wang, Z, Bao J, Wu X, Liu Y, Li L, Liu C, Suo L, Xie Z, Zhao W, Zhang W, Yang N, Li j, Wang S, Wang J. 2009. Peste des petits ruminants virus in Tibet, China*.* Emerging infectious Diseases,15: 299–301.

**Chapter seven**

**Appendix**

**Questionnaire**

1. **Name and address of the owner** ……………………………………………
2. **Patient data :**

Species……………….Breed……………..Age……………….Sex……..

BCS………………. Color…………….

**3.Source/ Target population :**

Source of patient : Farm livestock/ Domestic pet /Captiv Type of Farm : Cattle/Goat/ pig/Sheep/ Size of Farm : Total No. of animal

1. **Owner’s complaint (S) :**
2. **Anamnesis :**

Onset…………….. Duration of illness………….

Defecation………………Urination………………Feces: Normal/ Diarrhoea

Deworming:Y/N Vaccination:Y/N

Housing system:Intensive/ Semi-intensive/ Tethered/ Free range/ Other

Feeding regimen: Roughage/ Concentrate

Type of Grazing:……………………

**6. Clinical examination :**

Rectal Temerature….ºF/C Respiratory Rate:………/min

Visible mucous membrane : Pale/Pink/Icterus/Cyanotic/other

Skin lesion………… Dehydration: Normal/mild/moderate/severe

Posrute: normal/defective Gait: Normal/lameness

Feces: …………………………….. Mouth lesion…………………