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Culture and antibiogram studies in dogs with hemorrhagic gastroenteritis

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Hemorrhagic gastroenteritis in canines is of high clinical significance and is characterized by acute hemorrhagic diarrhea and marked hemoconcentration. In critical cases, there is severe hypoproteinemia, sepsis, hypovolemic shock, disseminated intravascular coagulopathy and death. Culture for fecal pathogens like *Yersinia* spp., *Campylobacter* spp., *Clostridium* spp., *salmonella* spp., *Escherichia coli*, etc. and an *in vitro* antibiotic sensitivity test helps the clinician in selecting the most appropriate antimicrobial agent. A study was carried out with the objective of culture and antibiogram studies in dogs with hemorrhagic gastroenteritis, at Madras Veterinary College, Chennai, keeping into account of the objectives, the parameters like prevalence of hemorrhagic gastroenteritis with reference to overall, age and sex wise, and season wise, parasitological examinations and its prevalence, bacteriological examinations and antibiotic sensitivity test. Various aspects of hemorrhagic gastroenteritis in dogs with regards to its prevalence, clinical signs, hematological, biochemical, histopathological changes and therapy for dehydration, water, electrolyte loss and elimination of primary cause had been taken into account in detail. The overall prevalence of gastroenteritis in dogs was 40% of 200 dogs. Highest prevalence with respect to age was recorded in 0-5 month (37.50%) followed by 6-11 month (27.50%), 1-2 years (22.50%) and above 2 years (12.50%). Sex-wise highest prevalence was recorded in males (62.50%) than in female dogs (37.50%). Season-wise highest prevalence was recorded in winters (27.50%) followed by monsoon (37.50%) and summers (35%). A total of 40 fecal samples were screened out for parasitic infestations, out of which 16 (40%) showed presence of parasitic infestation. Highest prevalence was recorded with *Ancylostoma caninum*, followed by *Toxocara canis*, *Taenia hydatigena* and *Toxascaris leonine*, respectively. The highest prevalence was of *E. coli* 08 (33.33%) followed by *Satphylococcus aureus* 05 (20.83%), *Campylobacter jejuni* 04 (16.67%), *Proteus vulgaris* 03 (12.50%), *Pseudomonas aeruginosa* 03 (12.50%) and *Shigella dysenteriae* 01 (4.00%) respectively. Antibiotic sensitivity test was performed by using pure culture of different bacterial agents which were isolated from fecal samples. Total eight antimicrobial agents employed for drug sensitivity test were Ciprofloxacin, Enrofloxacin, Gentamicin, Chloramphenicol, Ampicillin, Penicillin, Tetracycline and Streptomycin. It was observed that *E. coli* organisms were strongly sensitive to Ciprofloxacin and Enrofloxacin (100%) followed by Gentamicin (88%), Chloramphenicol (55%), Ampicillin (11%), Penicillin (5%) and resistant to Tetracycline and Streptomycin. Nearly all strains were sensitive to Polymixin-B, Gentamicin, Furazolidone and Nitrofurantoin but resistant to Penicillin, Erythromycin and Sulfonamides.

Biography

D S Rawat is a Senior Veterinarian and has been consistently working with the Governmental Organization for the past 17 years holding various positions in a diversified scenario like Dairy Development Department, Animal Husbandry Department, Rural Development Department. He is presently working as a Deputy Director (Planning) in Watershed Management Department in the state of Uttarakhand, India. He has graduated in Veterinary Sciences and Animal Husbandry in the year 2000 from GBPUA&T Pantnagar, Uttarakhand, India and did Post-graduation Diploma in Small Animal Emergency and Critical Care Medicine from TANUVAS, Chennai, India, in the year 2015. He has been implementing and facilitating the ongoing community development projects with new technological advancements, innovations in livestock and linking them with the premier institutes of the country with inclusiveness of environmental impact of animal production, ration balancing program to avoid over production of greenhouse gases and livestock waste management programs.

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