Research in
AGRICULTURE, LIVESTOCK and FISHERIES
ISSN : P-2409-0603, E-2409-9325
An Open Access Peer-Reviewed International Journal

Article Code: 474/2025/RALF
Article Type: Research Article

Res. Agric. Livest. Fish.
Vol. 12, No. 1, April 2025: 45-52.

Pattern of Common Feline Diseases and Drug Utilization at District Veterinary Hospital of Narayanganj, Bangladesh

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ARTICLE INFO

Received
08 April, 2025

Revised
28 April, 2025

Accepted
30 April, 2025

Key words:

Feline diseases
Veterinary hospital
Drugs
Narayanganj
Bangladesh

ABSTRACT

Pet animals, particularly cats, live close to humans, posing a potential risk of zoonotic disease transmission when infected. A cross-sectional study was conducted at the Narayanganj District Veterinary Hospital from October 11 to November 9, 2024, to determine the prevalence of common feline diseases and associated drug usage. A total of 142 cats was examined, of which 119 (83.8%) were diagnosed with various diseases, while 23 (16.2%) were clinically healthy. Among the diseased cats, 91 (76.5%) presented with common illnesses, and 28 (23.5%) exhibited less typical conditions. Feline Panleukopenia Virus (FPV) was the most frequently diagnosed common disease (38.5%), followed by endoparasitic infections (29.7%), ectoparasitic infestations (18.7%), and feline infectious peritonitis (FIP) (13.2%). Age-wise distribution indicated that younger cats (0–5 months) exhibited the highest prevalence of illness, particularly FPV (21%). Gender-based analysis revealed that endoparasitic infections were more prevalent in male cats (58%), whereas FPV was more commonly observed in females. Breed analysis showed that although FPV was most prevalent among local breeds, it affected all breeds to some extent. Regarding treatment, antibiotics were the most frequently prescribed medications (75%), with ceftriaxone being the predominant antibiotic (47% of all prescriptions). Other therapeutic agents included antihistamines, anthelmintics, NSAIDs, vitamins, and electrolyte solutions. Vaccination history was also assessed, underscoring its critical role in disease prevention. This study highlights the need for targeted disease management strategies and reinforces the importance of vaccination and preventive healthcare in improving feline health outcomes.

To cite this article: Noor N. J., M. E. R. Bhuiyan, M. S. Islam, A. Wasef, M. S. Islam, N. S. Tonu, V. K. Sah, M. S. Jahan, 2025. Pattern of Common Feline Diseases and Drug Utilization at District Veterinary Hospital of Narayanganj, Bangladesh. Res. Agric. Livest. Fish. 12(1): 45-52.

DOI: https://doi.org/10.3329/ralf.v12i1.81398

Introduction

The practice of rearing pet animals has grown increasingly popular in Bangladesh in recent years, particularly in urban areas. Among the various companion animals, cats and dogs hold a prominent place due to their adaptability and the emotional, social, and recreational value they provide to their owners. Globally, pet animals play a significant role in society, contributing to the physical, emotional, and psychological well-being of individuals and families (Robertson *et al*., 2000). In Bangladesh, many individuals keep cats and dogs primarily for companionship, recreation, and as part of the family. Among domestic pets, cats are one of the most successful felids that have adapted well to human habitation worldwide, including in Bangladesh. Cats are known to contribute to the emotional and social development of children, promote stress reduction in adults, and improve the overall well-being of their owners (Hossain and Kayesh, 2014). Despite the absence of official data on the feline population in Bangladesh, anecdotal evidence suggests a rising trend in cat ownership. However, with the growing population of pet cats, concerns about pet health and zoonotic disease transmission have become increasingly important.

Diseases such as feline panleukopenia, feline infectious peritonitis (FIP), and various parasitic infestations (both endoparasites and ectoparasites) are commonly reported in cats and pose significant challenges to pet care in Bangladesh (Sultana *et al.,* 2016). These diseases can severely affect the health of cats and, in some cases, pose public health risks due to the zoonotic potential of certain pathogens. While pet ownership has been associated with health benefits such as lower blood pressure, reduced stress, and decreased medication use (Headey and Grabka, 2004), neglect of responsibilities such as proper housing, hygiene, vaccination, and deworming may result in health hazards to both pets and humans.

Cats are often kept in close proximity to humans, and without appropriate veterinary care, they may become reservoirs of various parasitic, bacterial, viral, and fungal diseases (Plaut *et al*., 1996). Despite the increasing number of cats kept as pets in Dhaka and other urban regions, there is a significant lack of awareness among pet owners regarding common feline diseases, preventive care, treatment options, and responsible ownership practices. Common health threats include cat bites, pet allergies, and zoonotic diseases, which highlight the need for proper health management and public education. Despite the rising interest in pet keeping, there is a paucity of scientific studies documenting the health status of cats in Bangladesh. This study reveals the prevalence of common feline diseases at the District Veterinary Hospital (DVH) in Narayanganj, assess the relationship between disease occurrence and factors such as breed, age, sex, rearing conditions, and immune status, investigate strategies for the prevention and control of these diseases, and evaluate the therapeutic use of drugs in their clinical management.

Materials and Method

Study area and duration

This was a study performed at the District Veterinary Hospital (DVH), Narayanganj, Bangladesh during the 30-days study period from October 11, 2024 to November 9, 2024. The necessary information and data were collected directly from cat owners and from registered record books of the District Veterinary Hospital where all diseased cats were brought for treatment. Some healthy cats were brought for vaccination. Registered record books of DVH include, name and address of the owner, date, breed, age and body weight of patient, clinical signs, tentative diagnosis, and treatment.

Data collection

During the study period, information on 142 pets was obtained from the DVH and registration book. where 119 cats were found diseased and 23 cats were found healthy. Every piece of information was gathered by observing the cat, speaking with the owner face-to-face, asking the owner the same questions repeatedly, and

keeping some records based on the owner's species, number of animals, sex, age, breed, body weight, source of purchase, disease condition, deworming, vaccination, prior medical condition, feeding schedule, feed supplement, favorite feed, rearing system, issues, and recommendations.

Clinical examination and diagnosis

The cat's illness at DVH was diagnosed through a combination of physical examination, diagnostic tests, and medical history. Key assessments included auscultation, percussion, palpation, and observation of posture and gait. Vital signs—pulse, temperature (measured rectally), and respiration—were recorded. Signs of viral diseases such as fever (102–105°F), vomiting, diarrhea, nasal discharge, and respiratory distress were evaluated, with the lung and trachea examined via stethoscope. In suspected FPV cases, symptoms varied by age and immune status, typically including fever, anorexia, vomiting, diarrhea, and dehydration. FIP presented in two forms: wet (fever, anorexia, abdominal fluid) and dry (fever, anorexia, weight loss). Parasitic diseases were diagnosed based on history, symptoms, and fecal exams, including observation of worms or tapeworm segments. Ectoparasites, causing skin lesions and irritation, were identified through physical signs like licking and scratching (Akucewich *et al.,* 2002).

Statistical analysis

All the data were inputted in SPSS version 26.0 for statistical analysis to perform the Pearson's Chi-square test. All *p*-values <0.05 were considered statistically significant.

Results

Overall prevalence in cats

A total of 142 cats were examined during the study period. Out of these, 119 cats (83.8%) were identified as diseased, while only 23 cats (16.2%) were found to be healthy. Among the 119 diseased cats, 91 cats (76.5%) were diagnosed with common diseases, while 28 cats (23.5%) suffered from other less common conditions. Moreover, 67% cats were non-vaccinated, whereas only 33% cats were vaccinated.

Prevalence of common diseases in cats

The most prevalent disease was Feline Panleukopenia Virus (FPV), found in 35 cats (38.5%). This was followed by Endoparasitic infections, 27 cats (29.7%), Ectoparasitic infestations, 17 cats (18.7%) and Feline Infectious Peritonitis (FIP), 12 cats (13.2%) (Figure 1).

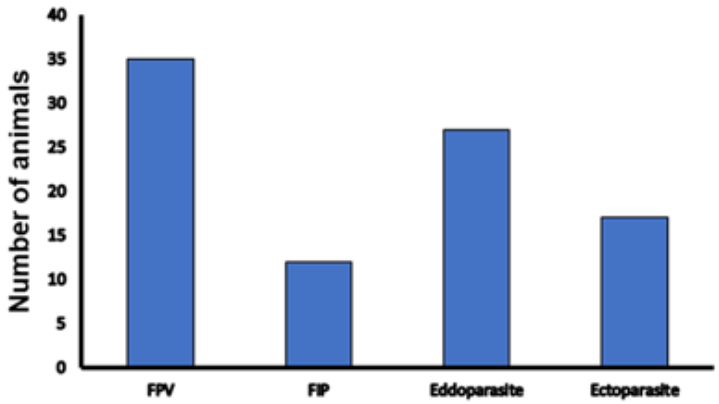

Figure 1. Prevalence of common disease

Prevalence of diseases in cat based on age

Among the 91 cats studied, 37 belonged to the 0–5 months age group, 31 were between 5–12 months, and 23 were over 1 year old. In the youngest group (0–5 months), the highest disease prevalence was recorded for Feline Panleukopenia Virus (FPV) at 21%, while ectoparasite infestations were the least common at 3%. In the 5–12 months group, FPV again showed the highest prevalence at 12%, whereas ectoparasites and Feline Infectious Peritonitis (FIP) both had the lowest prevalence at 7%. For cats over 1 year of age, ectoparasites and endoparasites were equally the most prevalent (9%), while FIP showed the lowest prevalence at just 2%. Overall, disease occurrence was most frequent in the 0–5 months age group, and least common in cats older than 24 months (Figure 2).

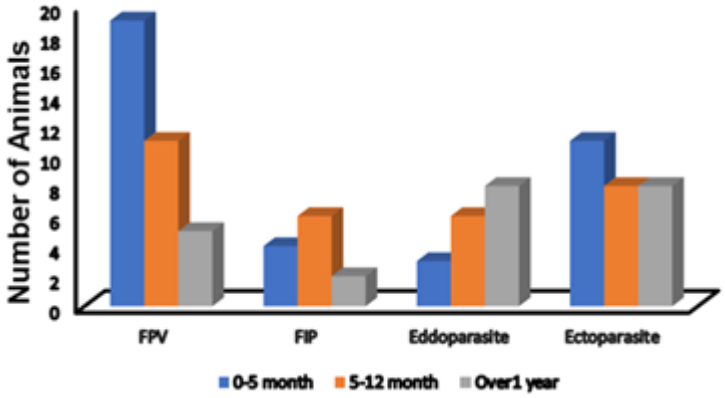

Figure 2. Age wise disease in cat

Prevalence of diseases in cats based on sex

Total 91 cats were observed. Among them, 53 were male and 38 were female. In male, the highest disease prevalence found was endoparasite (20%) and the lowest was FIP (9%). In female, highest disease prevalence was FPV (22%) and the lowest was FIP (4%). In a word, the highest prevalence of disease was found in male (58%) and lowest in female (42%) (Figure 3).

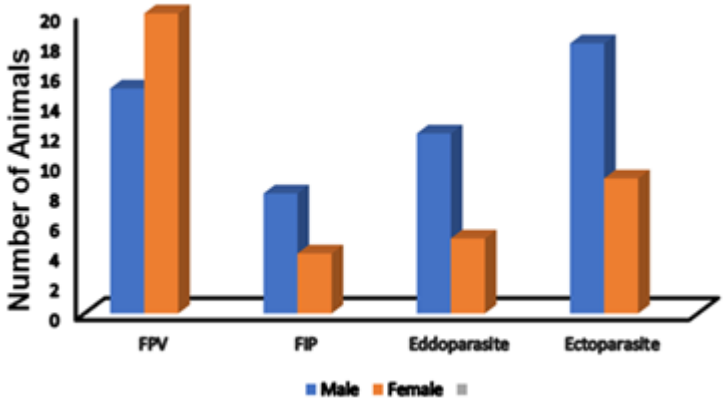

Figure 3. Sex-wise common disease in cat

Prevalence of common diseases in cats based on breed

Among 91 cats, there were 47 local cats,14 Persian,30 mixed breed. In local cats, highest prevalence was found in FPV (18%) and lowest in FIP (4%). In Persian cats, highest prevalence was found in FPV (8%) and lowest in ectoparasites (2%). In mixed cats, highest prevalence was found in FPV (12%) and lowest in ectoparasites (3%) (Figure 4).

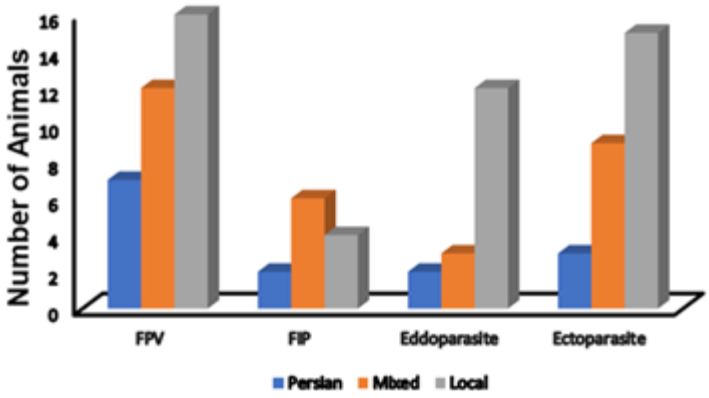

Figure 4. Breed-wise common disease in cat

Drug used for treatment

For treatment purposes, antibiotics were administered to 68 animals, making them the most commonly used therapy (75%). Vitamin and mineral supplements followed closely, being given to 63 animals. Anthelmintics were used for 52 animals, while electrolytes were provided to 48 animals. Antihistamines were administered to 32 animals. The least utilized treatment was NSAIDs, used for only 27 animals (30%) (Figure 5).

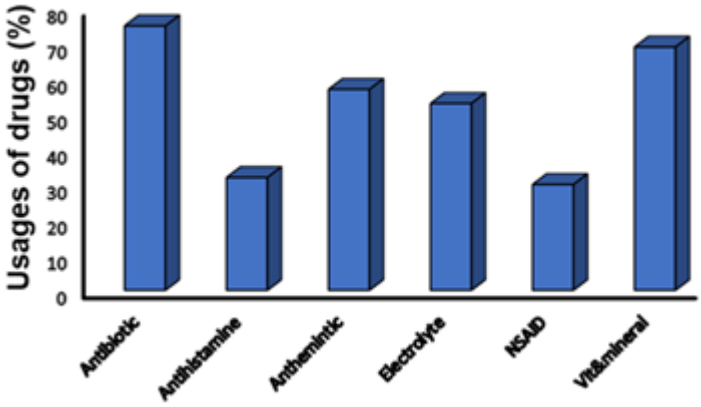

Figure 5. Drugs used for treatment

Antibiotics prescribed for treatment

Antibiotics were administered to 68 cats in total. Among them, Ceftriaxone was the most frequently used, prescribed for 32 cats (47%). Metronidazole was given to 18 cats, Ciprofloxacin to 8 cats, Marbofloxacin to 7 cats, and Renamycin to 3 cats—the latter being the least used antibiotic (4%) (Figure 6).

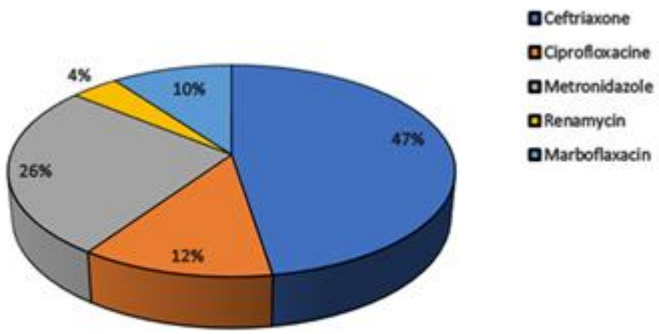

Figure 6. Antibiotics used for treatment

Discussion

This study was conducted to identify the prevalence of common diseases in cats at District Veterinary Hospital, Narayanganj, Bangladesh. Due to hot humid weather in Bangladesh and improper vaccination and deworming status, itis observed that the prevalence of Feline Panleukopenia Virus (FPV) infection remains highest in cat than endoparasite and ectoparasite infestation. Considering the sex, male cats were prone to infections in comparison to female cats. Between 0-5months of age was more susceptible to the infections and the infection can be reduced by proper vaccination in cat. Moreover, higher disease prevalence was seen in local breed compared to mixed-breed. However, deworming should be performed regularly every 3 months and this will decline the intestinal parasitic infestation. Proper skin care is also a viral factor to put away ectoparasites prevalence. Balanced nutritional diet and giving feed supplement will lessen the nutritional diseases. In case of any disease's prevalence, timely consulting with registered veterinarian is most important for the better health condition of pet animals. This study provides a comprehensive overview of the health status and disease prevalence among domestic cats, revealing significant patterns associated with age, sex, breed, and treatment modalities. Out of 142 cats examined during the study period, a striking 83.8% (119 cats) were diagnosed with diseases, indicating a high burden of illness in the surveyed population. Only 16.2% (23 cats) were found to be clinically healthy. This high rate of morbidity suggests poor access to regular veterinary care, lack of preventive measures like deworming and vaccination, or possibly substandard living conditions, particularly among stray or locally bred cats. Among the diseased cats, the majority (76.5%) were affected by commonly occurring illnesses, while 23.5% suffered from less frequently observed or miscellaneous diseases. This emphasizes the importance of targeting the most prevalent diseases—such as FPV and parasitic infections—in public awareness, vaccination programs, and treatment protocols. The most frequently reported disease was Feline Panleukopenia Virus (FPV), accounting for 38.5% of the common diseases. This aligns with other studies that highlight FPV as a major cause of morbidity and mortality in young unvaccinated cats. Parasitic infections, both endoparasites (29.7%) and ectoparasites (18.7%), were also significantly prevalent, highlighting the need for routine deworming and ectoparasite control. This finding is similar to Hartmann *et al.,* 2021. Younger cats, particularly those aged 0–5 months, exhibited the highest

overall disease prevalence. This is expected, as young animals typically have immature immune systems and are more susceptible to viral and parasitic infections. The result is comparable to Sordo *et al*., 2020. Disease prevalence was higher in male cats (58%) compared to females (42%), with endoparasitic infections being most common in males and FPV in females. Jitsamai *et al.* (2021) showed similar findings in their study. Local breeds showed the highest disease burden, particularly with FPV (18%). This could be due to their greater exposure to outdoor environments, lack of vaccination, or minimal veterinary supervision compared to Persian or mixed breeds (Hasan *et al.,* 2022). Antibiotics were the most commonly used treatment (75%), followed closely by vitamin/mineral supplements (69%) and anthelmintics (57%). This suggests a high reliance on broad-spectrum therapies, likely due to the symptomatic or presumptive treatment of undiagnosed conditions. The use of NSAIDs (30%) was the lowest, possibly due to concerns over side effects or less need for pain management in the observed disease conditions. Among antibiotics, Ceftriaxone was the most frequently prescribed (47%), reflecting its broad-spectrum efficacy and possibly empirical use in febrile or septic cases (Hasib *et al.,* 2020). Other commonly used antibiotics included Metronidazole (26%) and Ciprofloxacin (12%). The lower use of Renamycin (4%) may suggest limited availability or reduced clinician preference. The patterns of antibiotic use also raise concerns about rational drug use and potential antibiotic resistance, warranting further investigation and regulation.

Conclusion

The findings of this study underscore a pressing need for improved feline healthcare, particularly in preventive measures such as vaccination, deworming, and routine health checks. Special attention should be paid to young and male cats, as well as local breeds, which are more vulnerable to disease. Furthermore, responsible antibiotic use and effective parasite control strategies are essential to curb disease spread and resistance.

Conflicts of Interest

The authors have declared that there is no conflict of interest for publication.

Acknowledgements

The authors are grateful to the Veterinary Surgeon (VS) and District Livestock Officer (DLO) of the District Veterinary Hospital, Narayanganj, Bangladesh, for their support during the conduct of this study.

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