



RESEARCH PAPER

Incidence of canine reproductive cases presented to veterinary college Gadag, during 2021-2023

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Abstract : A study on the incidence of gynaecological cases in canines was presented between April 2021 and March 2023 at the Department of Veterinary Gynaecology and Obstetrics, Veterinary College Gadag. A total of 374 gynaecological cases were presented. The highest incidence was found to be Exfoliative Vaginal Cytology (36.10%), followed by Pregnancy Diagnosis (26.74%), Birth control (7.49%), Tumour (7.22%), Assisted mating and AI (7.22%), Pyometra (6.15%), Anoestrous (4.28%), Mismating (2.41%), Dystocia (1.34%) and Retention of Fetal Membranes (1.07%). Breed-wise predilection indicated that Labrador Retriever (32.89%), Golden Retriever (10.70%), German Shepherd (10.70%), Rottweiler (9.63%) and others (36.10%). The majority of cases were presented during Winter (29.94%), followed by Monsoon (25.94%), Autumn (22.73%) and Summer (21.39%).

Key Words : Incidence study, Reproductive cases, Canine

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INTRODUCTION

In the present scenario, a Dog (*Canis lupus familiaris*) is the most preferred companion animal in metropolitan cities and even in villages. Dogs act as protectors of sheep, goats, cattle and as guardians in many compartments. Owners treat their pets as their family members. Hence, their health matters more for them. Changed lifestyles and management of pets have made dogs prone to several general and reproductive health disorders. Moreover, awareness of canine health and diseases has increased over the years in India; as a result, a large number of canine cases are presented to

different clinics. Veterinary College Gadag is a newly established Veterinary College, with its first clinical batch undergoing clinical courses from 2020 onwards. Hence, a study evaluated the number of gynaecological cases presented in a newly established veterinary college. Gadag is a city located in North Karnataka with a canine population of 23708. Veterinary care is needed in emergencies. To achieve this goal, this college was established with good facilities in the year 2017.

MATERIAL AND METHODS

The present investigation was carried out to study

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the incidence of various reproductive cases presented in two years, from April 2021 to March 2023, at VGO, Gadag. The incidence of different gynaecological cases was analysed along with the incidence of breed predisposition and season-wise presentation. A Total of 374 gynaecological cases of canines were registered during this period for this study, and they formed the material.

RESULTS AND DISCUSSION

The overall incidence of different gynaecological cases attended in dogs during the period under study is presented in Table 1 and Fig. 1. Out of 374 cases, the highest incidence was found to be exfoliative vaginal cytology (EVC) (36.10%), followed by Pregnancy Diagnosis (26.74%), Birth control (7.49%), Tumour (7.22%), Mating and AI (7.22%), Pyometra (6.15%), Anoestrous (4.28%), Mismatching (2.41%), Dystocia (1.34%), RFM (1.07%),

Table 1: Incidence of different gynaecological cases of canines presented

Sr. No.	Cases	Number	Percentage (%)
1.	EVC	135	36.10
2.	Pregnancy Diagnosis	100	26.74
3.	Birth control	28	7.49
4.	Tumour	27	7.22
5.	Mating and AI	27	7.22
6.	Pyometra	23	6.15
7.	Anoestrous	16	4.28
8.	Mismatching	09	2.41
9.	Dystocia	05	1.34
10.	RFM	04	1.07
	Total	374	100.00

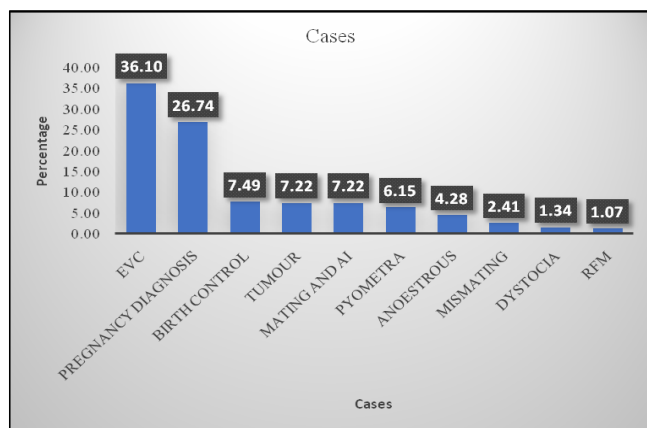


Fig. 1: Incidence of different gynaecological cases of canines presented

Anoestrous (4.28%), Mismatching (2.41%), Dystocia (1.34%) and Retention of Fetal Membranes (1.07%).

Breed-wise distribution of cases is presented in Table 2 and Fig. 2. The majority of patients belonged to Labrador Retriever (32.89%) followed by Golden Retriever (10.70%), German Shepherd (10.70%), Rottweiler (9.63%) and others (Non-Descript, Pug, Pomeranian, Great Dane, Pitbull, Doberman, Mudhol, Siberian Husky, Shihtzu, Spitz and Lhasa Apso) (36.10%).

Table 2: Breed-wise distribution of gynaecological cases of canines presented

Sr. No.	Breed	Cases	Percentage (%)
1.	Labrador retriever	123	32.89
2.	Golden retriever	40	10.70
3.	German shepherd	40	10.70
4.	Rottweiler	36	9.63
5.	Others	135	36.10
	Total	374	100.00

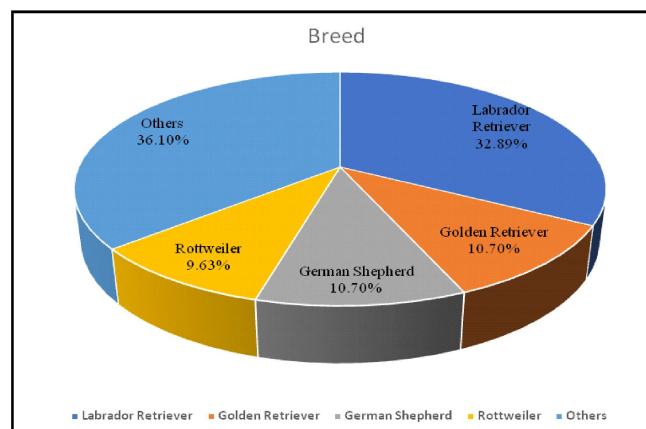


Fig. 2: Breed-wise distribution of gynaecological cases of canines presented

Season-wise presentation is given in Table 3 and Fig. 3. Most cases were presented during winter (29.94%), followed by monsoon (25.94%), autumn (22.73%) and summer (21.39%).

Table 3: Season-wise distribution of gynaecological cases of canines presented

Sr. No.	Season	Cases	Percentage (%)
1.	Winter (Dec- Feb)	112	29.95
2.	Monsoon (June- Sep)	97	25.94
3.	Autumn (Oct- Nov)	85	22.73
4.	Summer (Mar-May)	80	21.39
	Total	374	100

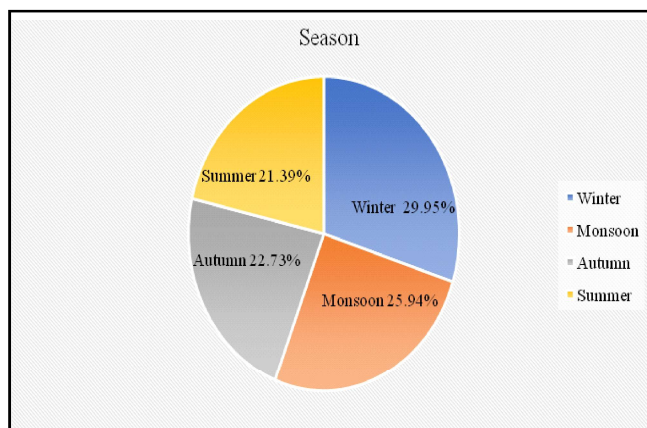


Fig. 3: Season-wise distribution of gynaecological cases of canines presented

In the present study, the most common clinical case presented was for Exfoliative Vaginal Cytology (EVC - 36.09%) which might be due to a lack of awareness of breeding time by the owners. This can be correlated with the number of cases presented for mating and (Artificial Insemination) AI (7.22%). The figures indicated that it could also be due to a sudden increase in pet population among new dog parents, who would have reared the dogs for the first time. Through these cases, they were made aware of breeding seasons, cycles, clinical signs and when to get the mating done in canines. Through Exfoliative vaginal cytology owner could be made aware of the dates for mating through which the conception rate had increased, which is indicated by the incidence of pregnancy diagnosis presented in these bitches was 26.74%. Exfoliative vaginal cytology is the most popular diagnostic method as a part of the gynaecological examination of the female dog.

Pregnancy diagnosis (94 cases) and pseudopregnancy (6 cases) were presented. Pseudopregnancy was diagnosed for the problems and treated/advised accordingly. The pregnancy diagnosis helped in knowing the status of the fetus and ruling out pseudopregnancy or non-pregnancy. Hence, knowing these forms was an important part of the incidence study. Other authors reported the higher proportion of cases for pregnancy diagnosis was 29.09% (Kumar *et al.*, 2011) and a lower incidence was noted 13.18% (Rohit *et al.*, 2021), 16.25% (Gupta *et al.*, 2020) and 21.14% (Sethi *et al.*, 2019.).

Canines bought for birth control (Ovario hysterectomy - OHE) and Castration) were 7.49%, which is done to reduce males' aggressiveness and avoid further breeding of their pets. According to other authors,

the higher proportion of OHE cases was 16.28% (Rohit *et al.*, 2021) and 11.61% (Dabhi *et al.*, 2005). Whereas lower incidence was reported at 3.63% (Sethi *et al.*, 2019), this is similar to our study.

The occurrence of tumours was 7.22%, which was lower than 16.52% (Dabhi *et al.*, 2005.) and 22.22% (Kumar *et al.*, 2011) but lower than 4.65% (Rohit *et al.*, 2021).

The incidence of pyometra observed in the present study was 6.15%, which can be diagnosed by clinical signs and ultrasonography and treated accordingly. The lower incidence might be due to the shorter life span of the dogs in this area. Other authors reported prevalence of pyometra was 18.86% (Rohit *et al.*, 2021), 23.25% (Gupta *et al.*, 2020), 31.77% (Nagar *et al.*, 2008), 40% (Honparkhe *et al.*, 2010) and 40% (Singh *et al.*, 2013), which was higher than the present findings. Likewise, the lower incidence of pyometra was 2.2% (Gibson *et al.*, 2013) and 3% (Sathiamoorthy *et al.*, 2011).

The incidence of anoestrous was recorded in 4.28% of cases. Which was lower than 6.06% (Kumar *et al.*, 2011) and 6.09% (Nagar *et al.*, 2008) and higher than 4.39% (Rohit *et al.*, 2021) and 2.26% (Gupta *et al.*, 2020).

The number of mismating cases was 2.41% in the present study, which was lower than 2.67% (Gupta *et al.*, 2020), 3.12% (Dabhi *et al.*, 2005), 3.63% (Kumar *et al.*, 2011) and 4.65% (Rohit *et al.*, 2021).

Dystocia was recorded in 1.34% of cases. The occurrence of canine dystocia among reproductive cases was 12% (Singh *et al.*, 2013). Abnormal parturition or dystocia occurs frequently in canines due to numerous fetal and maternal factors (Bonnet, 1980).

The higher incidence noted in Labrador retrievers (32.89%) followed by Golden Retrievers (10.70%) and German shepherds (10.70%) could be due to the breeds being more commonly reared in this area. The lower incidence in other cases may be due to the relatively low population of the dog breeds. The incidence of Labrador Retriever and Golden Retriever was higher than 29.57% (Hadiya *et al.*, 2021), 6.79% (Gupta *et al.*, 2020) 24.79% (Bhuyan *et al.*, 2022) and 3.17% (Hadiya *et al.*, 2021), 0.41% (Gupta *et al.*, 2020), respectively, but German Shepherd was lower than 11.46% (Hadiya *et al.*, 2021) and higher than 6.79% (Gupta *et al.*, 2020).

The majority of cases were presented during winter (29.94%), followed by monsoon (25.94%), Autumn (22.73%) and summer (21.39%). Other authors reported that incidence was higher in summer (36.32%), winter

(25.64%), monsoon (19.23%), and autumn (18.80%) (Bhuyan *et al.*, 2022). Environmental factors play a major role in affecting reproductive efficiency in canines.

Conclusion:

In this study, it was concluded that more reproductive cases were recorded in Labrador Retriever, Golden Retriever and German Shepherd and were mainly presented for mating-related enquiry for which Exfoliative Vaginal Cytology was done, followed by pregnancy diagnosis. This could be because of newly adopted pet owners with less knowledge about pet breeding. Thereby indicating a need for an extension awareness programme in this direction among pet owners in the area of a newly established Veterinary College.

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