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Research Article

Incidence of Various Reproductive Disorders in Different Breeds of Bitches

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Abstract

The incidence of various reproductive disorders in bitches was calculated by studying the records of Teaching Veterinary Clinical Service Complex Mhow for the past five years (2007-11). The various reproductive disorders found in female dogs like pyometra, excessive vaginal bleeding, venereal granuloma, post-partum complications, pseudo pregnancy, abortion, anestrous, dystocia, genital prolapse, cystic endometrial hyperplasia and cystic ovaries incidence was calculated on the basis of breed of bitches. The incidence of physiological conditions like pregnancy and cyclicity in bitches brought to the clinic during retrospective data based study was higher 315/2963 (10.63%) than the incidence of reproductive disorders 248/2963 (8.23%).

Keywords: *Bitches; Breeds; Dystocia; Reproductive disorders; Vaginal Bleeding*

Introduction

In the present scenario, dog breeding has become an international hobby and the dog is considered as the best companion to human beings. The breeders/owners are very much concerned about the reproductive health of their pet for future fertility and to prevent periparturient reproductive disorders especially dystocia. Multiple types of reproductive disorders exist in canines [1], but the exact information regarding their prevalence is meager. Obtaining this knowledge is necessary so that more attention can be paid towards developing therapeutic measures for the most prevalent reproductive disorders they suffer from. The female dogs suffering from various reproductive disorders like pyometra, excessive vaginal bleeding, venereal granuloma, post-partum complications, pseudo pregnancy, abortion, anoestrous, dystocia, genital prolapse, cystic endometrial hyperplasia and cystic ovaries incidence was calculated on the breeds suffering. A similar type of study was done previously [2]. Incidence of infertility higher due to ovarian diseases (ovarian cysts or ovarian tumours) in older bitches. Ovarian cysts and tumours were occasionally observed in young bitches previously reported [3]. So, this study was conducted to calculate the incidence of various reproductive disorders in bitches by studying the records of Teaching Veterinary Clinical Service Complex Mhow for the past five years (2007-11).

Materials and Methods

The incidence of various reproductive disorders in bitches was calculated on their breed wise categorization by studying the records of Teaching Veterinary Clinical Service Complex Mhow for the past five years (2007- 11). Percentage incidence was calculated as:

$$\text{Incidence (\%)} = \frac{\text{No. of respective breed females with reproductive disorders}}{\text{Total no. of ailing females admitted to clinics}} \times 100$$

Breed wise distribution was done as: Pomeranian, GSD, Labrador, Non Descriptive, Pug, Great Dane, Cross bred, Rotwiller, Bull Mastiff, Dalmatian and Dachshund.

Results and Discussion

The incidence of physiological conditions in the present study like pregnancy and cyclicity of animals reported to the clinic was higher than the incidence of reproductive disorders. Similar findings were observed by Joseph *et al* [4]. This higher incidence of reproductive disorders might be due to the location of the referral clinic TVCC MHOW and which is situated near the city. The incidence of reproductive disorders was calculated for the past five years (2007- 11) and their breed wise categorization was done. The incidence of physiological conditions like pregnancy and cyclicity in bitches brought to the clinic during retrospective data based study was higher 315/2963 (10.63%) than the incidence of reproductive disorders 248/2963 (8.23%).

Among various breeds highest incidence of reproductive disorders was observed in Pomeranian (29.83%) followed by GSD (28.22%), Labrador (19.35%), non-descriptive (8.06%), Pug (6.04%), Great Dane (2.41%), Cross bred (2.82%), Rotwiller (0.80%), Bull Mastiff (0.80%), Dalmatian (0.80%) and Dachshund (0.80%) respectively (Table 1). The findings of the present study coordinate with the previous results [2,5,6]. They also found the highest incidence of reproductive disorders in Pomeranians than other breeds. A higher incidence of reproductive disorders in the Pomeranian breed may be due to the large number of cases presented of that particular breed. While Ajala *et al*. [7] reported the highest incidence of reproductive disorders in the Alsatian breed (27.4%).

Breed (248)*	Incidence (%)
Pomeranian (74)	29.83
GSD (70)	28.22
Labrador (48)	19.35
Non Descriptive (20)	8.06
Pug (15)	6.04
Great Dane (6)	2.41
Cross bred (7)	2.82
Rotwiller (2)	0.80
Bull Mastiff (2)	0.80
Dalmatian (2)	0.80
Dachshund (2)	0.80

Table 1: *Breed wise incidence of reproductive disorders.*
**Figures in parenthesis indicate total no. of animals.*

Among various reproductive disorders there was the highest incidence of pyometra (30.24%), compared well with the results reported previously [2,6,8-11], followed by venereal granuloma (23.38%), post-partum complications (10.48%), dystocia (8.06%), excessive vaginal bleeding (7.66%), abortion (4.83%), pseudo pregnancy (4.43%), anoestrous (4.43%), prolapse (3.22%), cystic endometrial hyperplasia (2.01%) and cystic ovaries (1.20%) respectively (Table 2). A similar finding was observed by Dabhi., *et al*. [2] whereas, [12,13], and Deka., *et al*. [14], reported the highest incidence of venereal granuloma in bitches. Uterine inertia has been considered the most common cause for canine dystocia [15].

Reproductive disorder (248)*	Incidence (%)
Pyometra (75)	30.24
Venereal granuloma (58)	23.38
Excessive vaginal bleed (19)	7.66
Postpartum complications (26)	10.48
Pseudo pregnancy (11)	4.43
Abortion (12)	4.83
Anoestrous (11)	4.43
Dystocia (20)	8.06
Genital Prolapse (8)	3.22
Cystic endometrial hyperplasia (5)	2.01
Cystic ovaries (3)	1.20

Table 2: *Incidence of various reproductive disorders.*
**Figures in parenthesis indicate total no. of animals.*

The incidence of pyometra was highest in Pomeranian (41.33%) followed by GSD (22.66%), Labrador (17.33%), Nondescript (9.33%) compared with [6,16], Pug (6.66%), Great Dane (1.33%) and Dachshund (1.33%) respectively. Venereal granuloma was highest in Pomeranian (29.31%) and GSD (29.31%) followed by Labrador (24.13%), Non-descript (13.79%), Pug (1.72%) and Great Dane (1.72%) respectively. Genital prolapse was higher in Pomeranian (62.5%) followed by GSD, Non-descript and Pug (12.5%). Pseudo pregnancy was higher in GSD and Labrador (36.36%) each than Pomeranian (9.09%) and Pug (18.18%) respectively. The incidence of excessive vaginal bleeding was highest in Pomeranian (26.31%) and GSD (26.31%) followed by Labrador (21.05%), Non-descript (10.52%), Pug, Great Dane and Bull Mastiff (5.26%). Post-partum complications were highest in GSD (46.15%) than Pomeranian (23.07%), Labrador (15.38%), Great Dane (7.69%) Pug (3.84%) and Cross bred (3.84%) while the incidence of dystocia was highest in Pomeranian (25.00%) and Labrador (25.00%) followed by GSD (20.00%). Non-descript (10.00%) Bull Mastiff (10.00%), Pug (5.00%) and Dalmatian (5.00%).

A higher incidence of abortion was observed in Labrador (33.33%) than Pomeranian (25.00%) and GSD (16.66%), Nondescript, Pug and Cross bred (8.33%). Cystic endometrial hyperplasia was higher in GSD and Pomeranian (40.00%) than Nondescript breeds (20. 00%). The incidence of cystic ovaries was equal among Dalmatian (33.33%), GSD (33.33%) and Dachshund (33.33%). Anoestrous was higher in Rottweiler, GSD, Labrador and Nondescript each (18.18%) than Pug, Great Dane and Cross bred (9.09%) respectively (Table 3).

Reprodutive disorders	Pomeranian	GSD	Labrador	Non Descriptive	Pug	Great Dane	Bull Mastiff	Cross bred	Dachshund	Rot-willer	Dalma-tian
Pyometra	41.33	22.66	17.33	9.33	6.66	1.33	0.00	0.00	1.33	0.00	0.00
Venereal granuloma	29.31	29.31	24.13	13.79	1.72	1.72	0.00	0.00	0.00	0.00	0.00
Genital Prolapse	62.5	12.5	0.00	12.5	12.5	0.00	0.00	0.00	0.00	0.00	0.00
Pseudopreg-nancy	9.09	36.36	36.36	0.00	18.18	0.00	0.00	0.00	0.00	0.00	0.00
Excessive vaginal bleed	26.31	26.31	21.05	10.52	5.26	5.26	5.26	0.00	0.00	0.00	0.00
Post partum complictions	23.07	46.15	15.38	0.00	3.84	7.69	0.00	3.84	0.00	0.00	0.00
Dystocia	25.00	20.00	25.00	10.00	5.00	0.00	10.00	0.00	0.00	0.00	5.00
Abortion	25.00	16.66	33.33	8.33	8.33	0.00	0.00	8.33	0.00	0.00	0.00
CEH	40.00	40.00	0.00	20.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cystic ovaries	0.00	33.33	0.00	0.00	0.00	0.00	0.00	0.00	33.33	0.00	33.33
Anoestrous	0.00	18.18	18.18	18.18	9.09	9.09	0.00	9.09	0.00	18.18	0.00

Table 3: *Breed wise incidence of individual reproductive disorder.*

Conclusion

In the present retrospective study of the incidence of various reproductive disorders, it was observed that the Breed wise incidence of reproductive disorders was highest in Pomeranian, lowest in Rotwiller, Bull Mastiff, Dalmatian and Dachshund. In the incidence of various reproductive disorders pyometra is highest (30.24%), Cystic ovaries are lowest (1.20%).

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