COMPARATIVE INFLUENCE OF BREED, SIZE, AGE AND PARITY ON PREVALENCE OF PSEUDOPREGNANCY IN BITCHES

*P.J. Barge[1], M.S. Bawaskar[2], S.K. Sahatpure[3] and D.S. Raghuwanshi[2]

[1]M.V.Sc. Student, [2]Professor, [3]Professor & H.O.D., Department of Animal Reproduction ,Gynaecology and Obstetrics, Nagpur Veterinary College, Maharashtra Animal and Fishery Sciences University, Nagpur, Maharashtra, India.
*At present Livestock Development Officer, MHS. Govt.

The present study was conducted on 24 bitches irrespective of breed, age, size and parity suspected for the pseudopregnancy from adjoining Nagpur along with the cases attended at from adjoining Nagpur along with the cases attended at Veterinary Clinical Complex, Nagpur, during April to Nov 2021. The aim of present research work was to study the factors affecting the prevalence of pseudopregnancy in relation with breed, age, size and parity of bitch. Prevalence of pseudopregnancy was found to be highest in the age group of less than 2 years (37.5%), followed by age group between 2-4 years (29.16%), 4-6 years (16.66%) & it was found lower percent in the canines of age group 6-8 years as 16.66%. Among the dogs with pseudopregnancy majority were nulliparous bitches (58.33%) followed by primiparous bitches (29.16 %) and it was found lowest in pluriparous bitches 12.50

Keywords: Bitches, Parity, Prevalence, Pseudopregnancy.

The domestic bitch is a non-seasonalspontaneous ovulatory and monoestrous. The dog's estrous cycle consists of follicular phase with spontaneous ovulation, a luteal phase lasting approximately 75 days and a non-seasonal anestrus lasting 2–10 months (Concannon, 2011). The condition characterized by the presence of signs of pregnancy in a nonpregnant bitch is defined pseudopregnancy or false pregnancy or pseudocyesis. Pseudopregnancy can be classified as overt, which is the clinical condition and covert, which is the normal physiological condition (Tsutsui *et al.* 2007). Many factors sich as age, breed, parity, and environmental may influence on the prevalence of false pregnancy. Nutritional factors may also have a role in the prevalence of false pregnancy. Consequently, the endocrinology of pregnancy and pseudopregnancy are very similar in the bitch It is a physiological phenomenon in the mammalian species especially in canine, where all the signs and symptoms of pregnancy like nursing, ejection of milk from teat is observed in spite of the absence of foetus (Garai *et al.,* 2020).

Estimated incidence rate of pseudopregnancy may vary from 50% to 75% in most of the breeds of dog (Singh *et al.* 2018) though reported cases are scanty due to lack of diagnostic facilities in the field condition. Although the actual incidence of clinical false pregnancy and its distribution among breeds is unknown, it has been estimated up to 50-75% Age, breed, parity, and environmental factors may all influence the occurrence of clinical false pregnancy. Therefore, this research aims to look into the influence of these factors onpseudopregnancy in canines from Nagpur city.

Materials and Methods

The present study was conducted on 24 bitches presented at the Veterinary Clinical Complex, Nagpur Veterinary College, Nagpur, along with the symptoms of

pseudopregnancy during the period of 7 months from April to Nov 2021. The bitches were selected with the clinical signs of pseudopregnancy and around 30-90 days from their last estrus period for the present study. Diagnosis was done on the presence of clinical signs exhibited by the female dogs. The major differential diagnosis is pregnancy, which was ruled out by abdominal palpation, ultrasound or radiography. Influence of breed, size, age and parity of the bitch with the prevalence of pseudopregnancy was analyzed in 24 bitches during the present study.

Results and Discussion
Factors affecting the prevalence of pseudopregnancy in bitches:
Present study was carried out to find out the relation of various factors influencing the prevalence of pseudopregnancy in 24 bitches. Various factors included were breed, age, size and parity of bitches. and results obtained are as follows:-

Influence of breed and size on prevalence of pseudopregnancy:
Prevalence of pseudo pregnancy in different breeds is presented in Table1. Out of 24 pseudo pregnant bitches, highest prevalence of pseudo pregnancy was recorded in 11 Non-descript (45.83%) follow by 5 Labrador Retriever bitches (20.83%), 3 Pomeranian (12.50%), 2 Rottweiler (8.33%), 2 German Shepherd (8.33%) and lowest percent of pseudo pregnancy was observed in a single Bull dog with 4.16% prevalence rate of pseudo pregnancy. Likewise, out of 24 pseudo pregnant bitches the size wise prevalence was recorded.

Likewise, out of 24 pseudo pregnant bitches the size wise prevalence was recorded in Table 1, highest in 12 medium sized10-25kg weight) with 50% prevalence, followed by 9 large bitches (> 25kg) with 37.50% and least prevalence was recorded in 3 small bitches (<10kg body weight) with prevalence of 12.50 percent.

Table 1: Influence of breed & size on prevalence of pseudopregnancy in bitches (n=24)

Sr. No.	Name of Breed	Prevalence of pseudopregnancy (n =24)	
		No. of bitches	In percent (%)
1.	Non-descript	11	45.83 %
2.	Labrador Retriever	05	20.83 %
3.	Pomeranian	03	12.50 %
4.	Rottweiler	02	8.33 %
5.	German Shepherd	02	8.33 %
6.	Bull dog	01	4.16 %
Sr. No.	Size of bitches	Prevalence of pseudopregnancy (n =24)	
1.	Small (<10kg)	03	12.50 %
2.	Medium (10-25kg)	12	50.00 %
3.	Large (>25kg)	09	37.50 %

The present findings are in agreement with Wachida *et al.* (2019) who studied incidence of pseudopregnancy in 15 different breeds and reported that the incidence of false pregnancy was higher in Russian shepherd 7(46.66 %) followed by Alsatian 5(33.33 %) but it was lower in Mastiffs breeds as 2

bitches 8 per cent and single Rottweiler with 4 per cent. The present findings might be due to higher gross population of non-descript and Labrador breeds in the area under study.

Influence of age on prevalence of pseudopregnancy in bitches:

Table 2 presents the prevalence of pseudopregnancy found to be highest in the age Group of less than < 2 years (37.5%), followed by 2-4 years (29.16 %), 4-6 years (16.66%) while it was lowest in the bitches of age between 6-8 years (6.66 %).

Table 2: Influence of age on prevalence of pseudopregnancy in bitches (n=24).

Sr. No	Age (in years)	Prevalence of pseudopregnancy (n=24)	
		No. of bitches	Percentage (%)
1.	< 2 years	09	37.5 %
2.	2-4 years	07	29.16 %
3.	4-6 years	04	16.66 %
4.	6-8 years	04	16.66 %

Results obtained from the present study are in accordance with the findings of Darder, 2005, who stated that 75 percent of bitches showed their first clinical pseudopregnancy episode either during their first oestrous cycle or from the fifth on. As most of the dog owners are unaware about the proper breeding age they get their pet mated during the first expression of oestrus which might be the pubertal age of that bitch (1.5-2 yrs) depending upon the breed, pladogs could probably mean that it is the best age to mate bitches; at this age the dogs are sexually matured, and might have experienced the first and second oestrus. Therefore, higher prevalence of pseudopregnancy observed during the present study could probably due to early mating of the bitches.

Influence of parity with prevalence of pseudopregnancy in bitches:

The incidence of pseudopregnancy as noted in nulliparous 14 bitches (58.33%) followed by 7 primiparous bitches (29.16 %) and it was lowest in 3 pluriparous bitches (12.50%) out of 24 pseudopregnant bitches (Table – 3)

Table 3: Influence of parity on prevalence of pseudopregnancy in bitches (n=24).

Sr. No	Parity status of bitches	Prevalence of pseudopregnancy in bitches (n=24)	
		No. of cases	Percentage (%)
1.	Nulliparous	14	58.33 %
2.	Primiparous	07	29.16 %
3.	Pluriparous	03	12.50 %

The results from the present study are in close agreement with Razzaque *et al*. (2008) who found that the incidence of false pregnancy was higher (86.66 %) in first parity in 13 bitches followed by (13.33 %) in third parity in 2 bitches and pseudopregnancy was not found in second parity bitches It was stated and that parity could affect the exhibition of clinical pseudopregnancy. The reason for high incidence of pseudopregnancy at early stage ave already been explained that most bitches in the first parity are in between ages 1 ½ – 2 years, second parity 3 years and third parity 4 years of age respectively. Therefore, it can be advised to the breeders or owner to bred their bitches from 2 years onwards as the prevalence of pseudopregnancy at this age is minimal as evident from the present study.

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