LITTER SIZE IN PERSIAN CATS AND ITS INFLUENCE ON GESTATION LENGTH

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The gestational length in 13 Persian cats with known history of mating was calculated from day of last mating to day of parturition.At the time of parturition the litter size was noted. The mean gestational length was 64 .92 ± 0.56 (62 to 69) and the mean litter size was 4.23 ± 0.36 (2 to 6). Large litter size was associated with shorter gestation length in queens.
Key words: Gestation length, Persian cats, Litter size.

Introduction

In cats, the internal endocrine events (LH surge) and variation in the physiology of estrous cycle (polyestrus, induced ovualtors) makes it difficult to predict the time of parturition even with the availability of breeding data. There is very scanty data available about gestational length and litter size in Persian cats. Therefore present paper aims at getting information about gestational length, litter size and its influence on gestation length.

Materials and Methods

Total thirteen clinically healthy queens of Persian breed aged between 1.5 to 6 years and weighing around 1.5 to 3.0 kg with known dates of mating were observed for parturition date. At the same time litter size was noted down. The mean gestational length and litter size was calculated as per Snedecor and Cochren (1994). The correlation coefficient was calculated for judging effect of litter size on gestational length.

Results and Discussion

In the present study, the mean litter size in 13 Persian cats was **4.23 ± 0.36**and ranged between 2 to 6 kittens. The litter size recorded by Povey (1978) in Persian cats was lower (2.9) as compared to the findings of the present study. This finding was similar to that of Christiansen (1984) who found the average litter size to be 4 in cats. Johnstone (1987) reported the average litter size in Persian breed was 3.9 which was similar to the present study. The present finding was also similar to that of Sparkes *et al*. (2006) who reported a mean litter size of 3.8 kittens in Persian cats. The data regarding the same is presented in Table 1.

Table 1: Gestation length and litter size of queens from Group A

Queen No.	Gestation length	Actual litter size
C1	64	3
C2	65	5
C3	64	5
C4	63	4
C5	63	6
C6	66	3
C7	65	4
C8	63	6
C9	62	6

C10	67	2
C11	69	4
C12	67	3
C13	66	4
Mean ± SE	**64.92 ± 0.56**	**4.23 ± 0.36**

The mean gestational length in 13 Persian cats was 64.92 ± 0.56 days with the range of 62 to 69 days**.** Similar mean gestational length was reported by Jemmett and Evans (1977), Christiansen (1984), Colby (1986), Rice (1997), Romagnoli (2005) and Sparkes *et al*. (2006). However, Pineda (1989), Tsutsui and stabenfeldt (1993) and Root *et al.* (1995) have reported slightly longer mean gestational length in cats of 66 days. Similar range of gestatinal length of about 63 to 69 days as noted in present study was reported by Prescott (1973) Christiansen (1984) Pineda (1989) Tsutsui and stabenfeldt (1993). However Romagnoli (2005) and Verstegen (2005) have reported gestational lenth up to 74 and 72 days, respectively which is much higer than observed in present study. This might have been due to the fact that the cats taken in present study had controlled breeding conditions. Verstegen (2005) reported that gestational length was between 63 – 98 days. Sparkes *et al*. (2006) observed that in pedigree Persian cats parturition occurred between 63 and 67 days 90.2 %. Similar observations were made in present study. In present study 92.3% pedigree Persian cats parturated between 63 to 67 days post mating.

Correlation of the gestation length with the actual litter size gave a negative correlation value of – 0.66. The finding of the present study was in agreement with Stein (1975), Colby (1986) and Sparkes *et al.* (2006) who reported shortened gestation in case of large litter in queens. The present finding is also in accordance with Okkens *et al*.(1993) and Gavrilovic *et al*.(2008) who found a negative correlation (r = –0.96) and (r = –0.18), respectively, between the litter size and gestation length in bitches. Johnston *et al*.(2001) and Eilts *et al*.(2005) reported the influence of litter size on gestation length in case of bitches. However, Sendag *et al*.(2009) and Seki *et al*.(2010) did not find any influence of litter size on gestation length and their finding was not in agreement with the findings of the present study.

Conclusion

Therefore, it may be concluded that larger litter size is associated with shorter gestation length and small litter was associated with longer gestation length. The gestational length in Persian cats under controlled breeding is about 64.92 ± 0.56 days from last mating.

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