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PROLONGED GESTATION IN BITCHES Venugopal R.

Duration of gestation in bitches is highly variable if it is calculated from the date of first or last breeding. If we count with breeding dates, whelping occurs as early as day 54 or as late as day 72. The inability to predict whelping dates more accurately using the date of breeding is because of several reasons. The variation is attributed to the potential viability of canine spermatozoa for a period of 4 to 11d in the female reproductive tract and the long period of sexual receptivity in bitches. Prolonged duration of pregnancy is of concern if it lasts beyond day 60 of confirmed dioestrous (using vaginal cytology), beyond day 66 from the LH surge (using serial serum progesterone assay or vaginoscopy) or beyond day 68 from the date of first breeding.

Prediction of Gestation

Duration of gestation can be reliably predicted by serial vaginal cytologies, vaginoscopies or progesterone assays. Vaginal cytologies can be used to determine the onset of oestrous by maximal cornification or maturation of epithelial cells. Vaginoscopy to determine crenation or angulation of vaginal mucosal folds may also help to determine the stage of oestrous cycle. The mucosa is sharply angulated in mid to late oestrous, it is rounded with pronounced wrinkling in early oestrous and early dioestrous.

Progesterone assay in bitches is quiet useful for predicting the day of ovulation and whelping dates. This is because the serum progesterone levels in bitches will raise along with LH surge during oestrous and the LH surge precedes ovulation by 2 days. Progesterone assay can be Jone by using RIA or ELISA kits. If progesterone concentrations are 1-1.9 ng/ml ovulation occurs 2 days later, and breeding should be done within 4 days (3-6 days). If progesterone concentrations are 2-3.9 ng/ml ovulation occurs 1 day later, and mating should be done 3 days later (2-5 days). If progesterone concentrations are 4-10 ng/ml ovulation occurs on the day of sample collection, and breeding should be done 2 days later (1-4 days). With these recommendations the bitches will whelp 65, 64 and 62 days respectively after single mating or AI.

While determining the whelping dates, after a thorough physical examination one can go for abdominal radiography or ultra sonography. This is essential to confirm that the bitch is pregnant as opposed to pseudo pregnant. Ultrasonography is the preferred tool when foetal viability is to be assessed. Foetal death can be associated with an apparent prolongation of gestation due to the absence of foetal stress and the series of events that provoke the process of parturition. The bitch with a litter of dead foetuses usually requires surgery to remove the fetuses in order to avoid infection. Gestation length may be prolonged due to primary uterine inertia. This results in inadequate uterine contractions which will delay the process of whelping. Severe hypocalcaemia is uncommon in prepartum bitch because she is not lactating or is lactating only small quantities of milk. However mild hypocalcemia may decrease the strength or number of uterine contractions sufficient to initiate whelping. Gestation may also be prolonged if a single foetus is present, presumably because a single foetus is less stressed in uterus, delaying the onset of parturition.

The bitch with prolonged gestation can be managed by following a thorough history and physical examination. As a general rule, if the bitch is healthy and if the foetuses are viable one can wait up to 70 days from the date of first breeding. Meanwhile the rectal temperature should be recorded twice daily to predict the onset of whelping. If the stage two labour is not apparent within 48 hours after the drop in rectal temperature to less than 100F or if the gestation length exceeds 70 days from the first day of breeding, a caesarian section is recommended.

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Conclusion

To conclude, accurate prediction of the date of parturition in bitches is clinically useful to prevent or minimize reproductive losses by timely intervention. For example, an accurate method of predicting the date of parturition is necessary to plan an elective cesarean section. Intervention in full term pregnancy can reduce puppy mortality resulting from obstructions of the pelvis or vagina, histories of primary or secondary uterine inertia, or prolonged parturition. For bitches with histories of pyometra, abortion, embryonic reabsorption, or insufficient luteal phase, accurate assessment of gestational age can help evolve treatment strategies.

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Author

Dr.R.Venugopal MVSc. (OG), Veterinary Surgeon, Vilappil, Vilappilsala.po. Thiruvananthapuram 24