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Canine Prenatal Care

by

Gary L. Mallo, D.V.M.*

A definite program of canine prenatal care can provide a needed and appreciated veterinary service, particularly in the small animal specialty practice. Many dog owners wish their animals to have at least one litter of pups. Being very much aware of the intensive prenatal care in the human field, a comparable veterinary service is often sought. The veterinarian should be able to give authoritative and reassuring advice in this area. Many of the thoughts presented here are those acquired in the practice with which I was formerly associated.**

A series of visits, starting with the onset of heat and at various intervals during gestation, is the substance of the program.

The first examination should take place when the animal is in “secretory heat” (proestrus). At this time, the owner is advised of the proper age for breeding and when to breed. The female should not be bred on the first heat cycle, which occurs in most breeds around six to eight months of age, but rather on the second or subsequent heats. The bitch will accept the male at late proestrus and estrus. Two services are recommended. There are several methods of determining when to breed. Because proestrus usually lasts seven to nine days, breeding dates may tentatively be set at the 11th and 13th days after the onset of the vaginal discharge. The character of the vaginal discharge usually changes from a bright red to a clear or straw color at the end of proestrus or early estrus. Trials with the selected male dog may also be used. An animal with an atypical heat cycle may require an examination of the exfoliated vaginal cells to determine the optimum breeding time. A drop of vaginal fluid may easily be obtained with a medicine dropper, mixed with a drop of stain (0.1% toluidine blue or new methylene blue), cover-slipped and examined. The interpretation of the smear is based on the presence and amount of (1) erythrocytes, (2) leucocytes, (3) cornified and noncornified epithelial cells and (4) amorphous detritus. The findings may be summarized in the following chart.

Ovulation occurs in early estrus. Leucocytes reappear in the smear 72-96 hours after ovulation and their presence indicates maximum conception will probably not occur, if at all.

It usually is more satisfactory to transport the female to the male for mating rather than the reverse and not to have the mating in a veterinary hospital. A ten to thirty minute “tie” is desirable.

After breeding, a second examination four and one-half to five weeks later should be arranged. Pregnancy can usually be confirmed by palpation at this time. The stool should be examined for parasites and vermicides administered, if it has not been done previously. If a dis­temper-hepatitis booster has not been given in the preceding six months, it is advisable to do so at this time. Recom-

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mendations on a good protein diet should also be made.

The final prenatal examination may take place at around seven weeks of gestation. If positive pregnancy diagnosis was not possible in the previous examination, an x-ray may be taken. Usually abdominal distension is now visible. As most of the fetal growth takes place in the last trimester of gestation, further dietary recommendations are advisable. An increase in the amount of food consumed plus a vitamin-mineral supplement is important.

There are many human prenatal preparations available which may be used (Minacaps, Upjohn; Prenalac, Lilly; UTILcal, Ulmer). Veterinary vitamin-mineral products which may be employed are in various forms: powders (Vitamycin, Pitman-Moore; Vionate, Squibb), liquid (Pervinal, U. S. Vitamin), chewable tablets (Pet-Tabs, Massengill; Unipet, Upjohn). Some veterinarians prefer to use multiple vitamin capsules plus calcium gluconate or dicalcium phosphate tablets.

With parturition approximately two weeks in the future, the owner should be advised of events to anticipate. The pre-labor signs include a drop of body temperature, refusal of food, nesting, restlessness and signs of discomfort. Prelabor may precede true labor by six to twelve hours. Labor may last for two to six hours, depending on the reproductive history of the animal. Puppies may be delivered at intervals of from ten to ninety minutes, both anterior and posterior presentations being normal. The membranes should be quickly removed and the umbilical cords severed if the bitch fails to do so. It is not necessary that the bitch consumes the placentas and it may result in enteric disturbances.

If the owner does not object, the hair should be clipped from the perineal and medial thigh area as an aid to sanitation during parturition. An isolated whelping box in a warm area should be provided ten to fourteen days before delivery so that the bitch will become familiar with it. The eventuality of dystocia should be explained.

Having been advised of the above, the owner should be less apprehensive. It is good to follow parturition with an injection of oxytocin to aid uterine involution and removal of intra-uterine debris. Further instructions in regard to the increased nutritional requirements during lactation should be given at this time. If it is a breed requiring tail docking and/or dewclaw removal, this is best accomplished at three to five days of age.

If the owner wishes to utilize the nomogram as a guide for the future vacci-
nation of the puppies, a blood sample should be drawn from the bitch at parturition time and submitted to a serological laboratory.

**Summary**

The veterinarian can provide a helpful service to his clients through a program of canine prenatal care. Such a program might include examinations at breeding time, four and one-half to five weeks of gestation, seven weeks of gestation and after parturition. Professional counsel and advisable medical procedures are accomplished at each examination, depending upon the needs of the individual animal.

**REFERENCES**


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**SYMPOSIUM—WORLD ASSOCIATION OF VETERINARY FOOD HYGIENISTS**

The Fourth Symposium of the World Association of Veterinary Food Hygienists (WAVFH) will be held at the Nebraska Center for Continuing Education in Lincoln, Nebraska, U.S.A., July 26–30, 1965. This Symposium, sponsored by the University of Nebraska, will be the first such meeting held in the United States. Previous Symposia were held in Utrecht, The Netherlands; Basel, Switzerland; and Nice, France.

The purpose of this Symposium is to provide an opportunity for scientists, members of the medical profession, and government and agency officials from other countries to meet and exchange scientific research and information relative to sanitary control of foods of animal origin. It will also give them a chance to discuss trade practices, production methods, inspection procedures, packaging and packing, and other mutual problems with interested persons in similar positions from other countries.

This year's Symposium will provide simultaneous translation of all scientific sessions in English, Spanish, German and French. Themes of the Symposium will be:

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Dr. J. R. Hay
American Veterinary Medical Association
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Chicago, Illinois 60605, U.S.A.

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**MEETING**

December 6–7–8, 1965, American Association of Equine Practitioners Eleventh Annual Meeting, Fontainebleau Hotel, Miami Beach, Florida. Dr. Wayne O. Kester, 14 Hillcrest Circle, Route 3, Golden, Colorado, Executive Secretary.

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