

MYCOPLASMA AND INFERTILITY

by Dennis P. Jordan, D.V.M.

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Q. What is Mycoplasma?

A. Mycoplasma (Canine Mycoplasmosis) is a very small bacteria that causes infection of the mucus membranes of the reproductive tract as well as other systems in the body. The disease has long been recognized in man, cattle, pigs and more. Recently it has been reported in dogs. It is not uncommon to isolate mycoplasma from dogs and bitches with reproductive problems.

Q. Why is mycoplasma getting so much attention now?

A. In some dog show circles the disease is considered endemic. More breeders and veterinarians alike, are aware of the significant ramifications of mycoplasmosis in a breeding program. The education by both has precipitated more testing and consequently more diagnosis of the disease. Because it takes a special media and special laboratory to identify the organism, many infertile or subfertile studs and dams went undiagnosed in the past. **IT SHOULD BE POINTED OUT THAT MYCOPLASMA IS RELATIVELY EASY TO TREAT, ONCE DIAGNOSED.**

Q. What is the method of transmission?

A. Airborne and venereal transmission of the disease have both been reported. Clinically normal dogs (i.e. dogs with no vaginal or preputial discharge, fever, or other evidence of infection) can harbor mycoplasma and be reproductively normal. This situation is much like a carrier state and can cause dissemination of the organism into the environment in very high numbers unbeknownst to the breeder. The

insidious nature of the disease makes it possible for the mycoplasma to get a very strong foothold into the kennel before even the most conscientious breed is aware of it. The net result can be a devastating effect on the conception rate in the breeding program.

Q. Is mycoplasma common?

A. Yes, but mycoplasma is considered normal flora in the dog, and yet there are other strains that are quite pathogenic. There seems to be a larger number of cases in (a) kennels where several dogs are housed in small, poorly ventilated facilities and where husbandry is substandard, and (b) Dogs that go frequently to dog shows and are therefore co-mingling with other, infected dogs.

Q. What are the clinical signs of infection?

A. MOST DOGS HAVE NO SYMPTOMS. Some have a vaginal or preputial discharge, a few have upper respiratory signs (nasal and/or ocular discharge, sneezing, coughing, etc.).

Q. How is mycoplasma diagnosed?

A. By a positive culture result. Cultures should be performed with a sterile speculum, from the anterior vagina and using a guarded swab. The swab should be placed in aimes media immediately and sent to a Diagnostic lab capable of culturing the organisms. Note: most Veterinarians do not have aimes media on hand and most labs do not routinely do mycoplasma testing. It is wise to find a Veterinarian and lab in advance of scheduling an appointment to have the tests run.

Q. How are sick dogs treated?

A. When an entire kennel is affected with mycoplasma, treatment is difficult since reinfection is common and there appears to be little immunity developed in the reproductive tract against mycoplasma and the organism continues to thrive in subsequent heat cycles. Treatment for mycoplasma involves treating on two levels:

(a) Treating the individual with an appropriate antibiotic for 3-6 weeks and reculturing to the point of getting a negative result. Appropriate antibiotics may include, Tetracycline, Baytril, Ciprofloxin, and Chloramphenicol. Treatment failures occur often because of failure to treat an individual long enough. Erythromycin, although not as efficacious, can be used to treat pregnant bitches.

(b) Treating the kennel may involve culturing all or many of the breeding stock and possibly treating all animals in the kennel. This will significantly reduce the microbial load of mycoplasma in the kennel environment and diminish chances for reinfection.

Q. What preventive measure can be done?

A. (a) Improve the husbandry:

1. Strict and regular cleaning of the kennels
2. Kennel dogs in smaller groups
3. Improve ventilation in kennel ing facilities.

B. Culture and treat both male and female before each breeding.

C. The single house pet or less intensive kennel situation is less likely to afford a situation where mycoplasma would proliferate.

Q. Can puppies get mycoplasma?

A. Yes, they can get the disease in utero or at the time of birth when passing through the birth canal.

Q. Is there a vaccine?

A. No vaccine is available, so control is based on good husbandry, preventive measures and establishing a good relationship with your veterinarian to diagnose, treat and eradicate when mycoplasma rears its ugly head.

Q. How do I know when to be suspicious about mycoplasma in my breeding program?

A. Research is still needed to fully define mycoplasma's role in canine infertility. However, no infertility work up would be complete without testing breeding stock for mycoplasma. A breeder would be wise to test for mycoplasmosis if they suddenly noticed reduced litter size and/or reduced conception rates in their breeding program.