

Mycoplasma synoviae Infection

Dr. K. B. M. Saiful Islam

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Other names: MS, Infectious Synovitis, Tenovaginitis

Cause, transmission, and epidemiology: Infectious synovitis is caused by *Mycoplasma synoviae* (MS). Egg (vertical) transmission is the more important form of spread of MS, but it is also transmitted by contact and air droplets (respiratory route) within the flock.

Clinical signs and lesions: This disease occurs in chickens and turkeys. Early signs are respiratory difficulty, lameness and a tendency of birds to rest on the floor. It occurs in growing birds. Other signs are pale combs, swollen hock joints, greenish diarrhea, an unwillingness to move to feed and watering troughs, loss of weight, and breast blisters (a result of persistent floor rest). In layer flocks there is a transient drop in egg production.

Although infectious synovitis is predominantly a disease of the upper respiratory tract, spread of infection in the body occurs, resulting in the inflammation of the joints of many infected birds. Joints contain mucoid yellowish to grey fluid, which becomes more solid as the disease progresses. In the respiratory tract mild inflammation may be seen in the trachea and in air sacs.

Differential diagnosis: Clinically, the disease is indistinguishable from chronic respiratory disease, caused by *Mycoplasma gallisepticum*. Diseases that may show similar signs and lesions are staphylococcal arthritis and infectious tenosynovitis (viral arthritis).

Diagnosis: Clinical signs and lesions provide information for a dependable tentative diagnosis. It can be confirmed by isolation of the causative organism on a MS media or in embryonating chicken eggs.

Treatment: Lamé birds are not successfully treated, but several antibiotics (tetracycline, oxytetracycline, tylosin, erythromycin and others) have been used to reduce losses, especially when given by injection rather than in feed or water. Recovery is slow for both respiratory and synovitis forms. Several antibiotics are variably effective. The most effective are **tylosin, erythromycin, spectinomycin**, lincomycin, and chlorotetracycline.

Prevention: Use replacement chicks from certified MS-free breeders. The all-in, all-out management system helps to avoid a build-up of *Mycoplasma* on a poultry farm.

Eradication is the best and only sure control.

Recovery: Generally, once a farm has had a flock with mycoplasma, subsequent flocks will be infected. Premises can get rid of MS by hatching MS-free eggs and placing them in a clean environment and with very strict biosecurity in place. If biosecurity cannot be achieved then recovery is probably not possible.