

Mycoplasma Arthritis

Mycoplasma arthritis is caused by infection with *Mycoplasma hyosynoviae*.

Mycoplasma hyosynoviae causes an arthritis (inflammation of the joint), resulting in lameness. If one joint is affected, the pig will appear lame. Usually, however, there is more than one joint affected and so the pig may show a shortened stiff gait.

Mycoplasma hyosynoviae persists in the tonsils, and is spread easily from pig to pig by contact and through the air via infected droplets. It will spread rapidly between pigs.

The organism survives outside the pig for up to 4 weeks when dry, and longer in wet conditions.

Clinical Signs

The organism enters the body via the tonsils, and circulates in the blood stream until it invades the joints and tendon sheaths resulting in swelling and lameness. The lameness is usually easier to identify when it affects a back leg, but infection of any joint can occur and usually more than one joint is affected.

Older sows develop a strong immunity, resulting in piglets receiving antibodies in the colostrum. This maternal antibody protection lasts about 12 weeks, so clinical signs are usually seen in pigs aged 12 weeks and older.

In young grower pigs clinical signs will be sudden. The affected joint may become swollen, and the pig will be lame on the affected leg. Usually more than one limb is affected, meaning that the pig will be reluctant to rise, sometimes requiring assistance, and will walk with a reduced stride length. Once these pigs are walking though, they will walk normally after a few paces and are then difficult to identify. This can be deceptive though, since the swollen joint will be painful, and the affected pig will usually only stand for a short period of time. These pigs have a reduced feed and water intake, leading to a lower growth rate.

In young adult breeding stock, particularly replacement gilts, clinical signs are similar but show a reduced level of lameness. Severely affected animals may still 'dog sit' though, needing assistance to rise.

Picture courtesy of en.engormix.com



Swelling of both hock joints, seen with Mycoplasmal arthritis.

Diagnosis

Diagnosis is often made by the clinical signs seen, along with response to treatment. *Mycoplasma hyosynoviae* is usually very responsive to treatment.

Post mortem of affected pigs can be undertaken and samples collected of suspect lesions in the joints to culture the organism, although this is difficult to carry out.

Treatment

In order for the treatment to be effective and to prevent the spread of the organism to other pigs, treatment needs to be given early in the course of disease. *Mycoplasma hyosynoviae* is usually sensitive to Lincomycin and Tiamulin. Treatment needs to be given for a full course to prevent cases relapsing a week later. Response to treatment is usually seen in 24 hours. Mycoplasmas are not sensitive to Penicillin. Concurrent anti-inflammatory/pain relief should also be considered to assist in the response clinically (steroid or non-steroidal).

Individual medication is the most effective form of treatment. Water and in-feed medication can be used if a large group are affected, but the medications do not normally penetrate the joint as well. The affected pigs also tend not to seek out food and water as much, so it is not as effective to treat these lameness cases using these medication methods.

Although some cases do spontaneously resolve, most untreated cases lead to a chronic lameness.

Control & Prevention

Disease usually results from excessive infection challenge and increased stress, for example due to moving/mixing. Stress on the pig can also be caused by temperature changes, draughts and increased stocking densities. Mycoplasmal arthritis is a respiratory disease in origin, so any ventilation issues, that help the spread of the organism or increase the challenge, will increase clinical disease seen on farm. To reduce the incidence of disease, it is advised to empty rooms/buildings completely before washing and disinfecting thoroughly, and using a lime wash on the floors and walls where possible.

There is no vaccine available for Mycoplasmal arthritis. Enzootic pneumonia (EP) is caused by a different Mycoplasma, for which there are vaccines available. There is no cross-protection however for Mycoplasmal arthritis.

**Please speak to your Vet to discuss any questions you may have
about Mycoplasmal arthritis on your farm.**