



Game Bird & Poultry Health Fact Sheet

Yolk sac infection (Mushy chick disease)

What is it?

The yolk sac is a very important structure for chicks, it contains lots of nutrients and antibodies which help to support the chicks through the first week of their lives. It naturally regresses during this first week as the chicks use up the nutrients contained. Due to the fact it is so nutrient rich, it is a perfect growth medium for bacteria. *E.coli* is the most commonly diagnosed cause of yolk sac infection but other bacteria can also be involved.

There are several ways in which the yolk can become infected. Sometimes the navel of the chick does not heal correctly and becomes thickened, thus allowing bacteria entrance to the yolk sac where it establishes an infection in the nutrient rich environment.

Faecal contamination of egg shells can lead to bacteria multiplying within the hatching egg.

The yolk sacs can also be infected during pre-setting through to incubation and transport to placement of the eggs. For example if the humid settings are not correct during this process the incidence of yolk sac could increase.

Symptoms / Clinical Sign

- High mortality up to 7 days of life, spikes in mortality often seen around 3-4 days of life
- Depressed lethargic chicks
- Decreased feed consumption
- Diarrhoea
- Chicks tend to huddle
- Enlarged protruding navels
- Distended abdomen

Diagnosis

Diagnosis is done via post mortem. On post mortem your vet may find enlarged, necrotic navels that are surrounded by discoloured skin. Depending on the bacteria that is causing the issue, depends on the colour of the skin, but frequently it is blue/green. These chicks will 'go off' very quickly, which is where the name, 'mushy chick disease' originates.

Quill Productions Veterinary Services

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Internally, the yolk sac is enlarged, congested and will have an abnormal consistency. Your vet can sample the chick to determine the causative bacteria, so that a correct antibiotic may be administered, if it is deemed necessary.



Picture showing inflamed necrotic navels on chicks allowing infection to enter the yolk sac and establish an infection.

Treatment

In cases of high mortality, antibiotics can be used to reduce these levels. Often though, the remaining chicks are frequently uneven. Culling levels may be high for the small uneven chicks affected.

Prevention

Prevention of yolk sac infection is very important and good biosecurity and husbandry is essential.

- Good husbandry
 - Ensuring the environment for the chicks arrival is up to spec to give the chicks the best start to life
 - Ensure enough and adequate access to feed and water so the chicks can immediately start to eat and drink
- Excellent hygiene at the breeder farm, hatchery and rearing farm
- Strict biosecurity
- Use of appropriate cleaning and disinfection products
- Excluding severely soiled eggs from the setter
- Cleaning of eggs

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