

NADIS disease bulletins are written specifically for farmers, to increase awareness of prevalent conditions and promote disease prevention and control, in order to benefit animal health and welfare. Farmers are advised to discuss their individual farm circumstances with their veterinary surgeon.

## Acute Glassers Disease

Acute septicaemia (“blood poisoning”) associated with infection with *Haemophilus parasuis* can typically occur in weaners of 8-10 weeks old, although in a completely naïve herd, it can affect animals of any age including adults. The causative organism – of which there are many identified strains – is very widespread in the pig population and in most herds infection is endemic. Disease can result from:-

- 1) Infection of weaners with high levels of challenge after maternal immunity has been lost.
- 2) Infection of introduced animals that are naïve.
- 3) Introduction of a strain variant to which immunity is inadequate.
- 4) An association with viral infections e.g. PRRS, PMWS and Swine Influenza.

### Presentation

In the most acute form, pigs will be found dead. Typically, there will be red to purple discoloration of the ears, abdomen and occasionally legs. Where pigs are found alive, there will be a range of symptoms:-

- 1) Collapse and laboured breathing associated with high temperatures (41°C/106°F or more). Skin discoloration is common.
- 2) “Meningitis” although there is more twitching of the body rather than paddling and convulsion associated with *Strep suis* infection.
- 3) Joint Ill – polyarthritis – affecting one or more legs with obvious joint swelling.
- 4) Coughing – particularly evident in herds which are free of enzootic pneumonia.

The post mortem picture is of a typical septicaemia with congestion of internal organs and excessive fluid and fibrin (protein) “tags” within both the abdomen and chest. The organism can be cultured from lung tissue or body fluids but cultures are best done as samples from a freshly killed pig – the pH changes that occur after death will kill the organism. Cultures must be set up rapidly if success is to be achieved. If the pig survives the acute infection, the excessive fluid will organise and lead to adhesion that may then subsequently be associated with “sudden” death, or may simply be picked up at slaughter – the typical chronic Glassers Disease picture.

The acute specific form of the disease and its consequences should be differentiated from the effects of secondary infection with *Haemophilus parasuis* in major viral disease outbreaks. The organism will commonly take advantage of an animal damaged

with PRRS or PMWS and be the ultimate cause of death. It may, however, be just one of a number of secondary infections in such situations.

(Occasionally, *Haemophilus parasuis* infection and Glassers Disease can be seen as a less severe but widespread disease in suckling pigs from 2 weeks old onwards and in herds so affected it is rare to see the acute disease at 8-10 weeks as well. Chronic cases with severe pleurisy and pericarditis (scarring around the heart) will still occur).

### **Treatment**

If spotted early enough and action is taken rapidly, affected pigs can be successfully treated and lead to a full recovery. The choice of antibiotic to treat pigs will lie with the unit veterinarian but as, a general rule, penicillin based treatments give good responses.

Where outbreaks are ongoing feed or water medication may be appropriate and the choice of antibiotics will again be made by the veterinarian based on clinical experience and responses to injectable treatments.

Removed to hospital pens and provisions of TLC are essential parts of any treatment regime for sick pigs.

### **Prevention**

Where a herd is known or believed to be free of *Haemophilus parasuis*, on no account should new stock enter the farm – carrier pigs being the most likely route of introduction.

From a clinical point of view, it seems that most pigs in an endemically infected herd pick up a “trickle” of infection in early life that overlaps with colostral protection. In this way, natural immunity can develop without disease. Separation of pigs early i.e. early weaning (as is practised in the USA) and distance separation of weaners may break this cycle of infection and lead to naïve pigs at 8-10 weeks that then become infected. This picture seems more common in high health (SEP free) herds and suggests a possible association (or lack of one) between *Haemophilus parasuis* and *Mycoplasma hyopneumoniae*.

Whilst in excess of 15 strains of *Haemophilus parasuis* are known, tests are not available in the UK to differentiate them. There appears to be little cross over of immunity between strains. A commercial vaccine containing strains 4 and 5 of *Haemophilus parasuis* is available, as a complication with *Mycoplasma hyopneumoniae*. This would normally be administered at 1 week and 4 weeks of age. However, if the strains involved in the disease is not 4 or 5, it will not work. Furthermore, in SEP free herds, it may not be appropriate to use a *Mycoplasma hyopneumoniae* vaccine. In such circumstances, an autogenous vaccine can be prepared from the farm’s own isolate but this must be done under special D.E.F.R.A. licence and producers should consult their veterinary advisors as to the appropriateness of such a programme.

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