REDUCED IMMUNITY – DUE TO STRESS – COMPOUNDS PROBLEM

Duncan Berkshire (MA VetMB MSc CertPM MRCVS), from XL Vets' Bishopton Veterinary Group, offers some tips and advice on controlling and minimising the impact of Glässer's disease on one finishing unit

QUESTION:

We buy in several thousand 20-kilogramme weaners each year from mixed sources, which we take through, on straw yards, to slaughter. We often have problems in the weeks following the arrival of a batch of pigs that can include a few coughing pigs, poor doing hairy pigs with swollen joints, and very sick pigs with a high mortality across the group. We also tend to have high pleurisy scores on the BPHS data that comes back from the abattoir, particularly in batches where we have had more problems in the weaners. Are all these signs likely to be related and what can we do to minimise them?

ANSWER:

The timings in the scenario you have described are typical of many situations where mixing animals from different sources with different health statuses and different strains of the same disease occurs. A compounding factor at this point in time is the reduced immunity due to the stress factor of handling, transport, mixing and settling into a new environment, allowing concurrent disease to also be a significant influence – all of these factors should not be underestimated in the way disease can present.

One major disease that can cause the variety of clinical signs you describe is Glässer's disease. This is classically seen in older weaners following the mixing of groups or after times of stress, just as you have described.

There are as many as 15 different strains of this disease, which is caused by the bacterium *Haemophilus parasuis*.

Glässer's is considered endemic on many farms, sometimes with more than one strain on a single unit. There is usually a strong maternally derived immunity, transferred through colostrum, which develops to the particular strain(s) on a farm. This often persists in the piglet until 10 weeks of age. In your situation, several factors are likely to be occurring that allow the outbreaks of clinical disease you are seeing.

As the natural immunity to Glässer's disease will be waning in this age of pig, the pigs are mixing from several sources and it is likely that naive pigs are coming into contact with different strains of the disease for which they have no immunity. This is all happening at a point of huge stress as already discussed.

VARIED SIGNS

An explanation for why you see varied signs to the outbreaks is likely to be dependent on the particular strains responsible and their virulence, combined with the relative immunity of the pigs in each batch.

Glässer's disease is spread mainly via nose-to-nose contact with a clinically infected or carrier pig, along with local spread by droplets in the air. For clinical disease to occur, only a very small number of bacteria are required to infect the pig.

The disease can present from very acute to a more chronic form. Where the infection has spread into the blood (septicaemia), very acutely sick pigs are seen or sudden deaths. Sick pigs can present collapsed with shallow breathing and may have a red/purple discolouration of the skin due to changes in blood flow to protect vital organs.

The bacteria classically affect the surfaces of internal organs. This causes inflammation known as pericarditis (heart), pleurisy (lungs), peritonitis (abdomen) and arthritis (joints). Pigs may present less acutely with signs of pneumonia and lethargy, swollen joints, lameness, nervous signs, general dehydration and loss of condition. The typical presentation of longer-standing Glässer's disease infection is 'poor doing' pigs that are pale and generally hairy.

Duncan Berkshire

Pigs that survive are likely to fail to clear the infection fully and develop a chronic form of the disease with chronic arthritis, pericarditis and pleurisy. These can be picked up at slaughter, as you have been seeing on your reports from the abattoir.

A presumptive diagnosis of Glässer's can be easy to make from the clinical signs and post-mortem examinations, but laboratory confirmation and typing of the strain can be more difficult as the bacterium is very sensitive and often dies with the pig.

For the best chance of a diagnosis, euthanising untreated pigs and taking fresh samples for culture is advised.

PROMPT TREATMENT

When signs are first seen of Glässer's, treatment should begin promptly. Where a whole group of pigs are at risk, and a large proportion is likely to be sub-clinically infected, treatment via water and feed can be used to treat infections, prevent transmission and reduce losses. Simple penicillin is often effective, but laboratory tests should be used to guide the choice on individual farms.

Prevention of the disease is most important since pig losses and reduced growth rates can be substantial. Ideally, in your situation, you should aim to know the history of the disease on the farms you source from and, if possible, never mix pigs from different sources. Controlling other diseases is also important as they can act as a trigger for Glässer's disease.

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Reducing stress by providing a more suitable environment can assist production. This could be by providing a warmer, kennelled area and deep straw, eliminating draughts and supplying increased access to food and water so it is easily found and competition is minimal.

Vaccination can be an effective aid in minimising the spread and effects of Glässer's disease. There are two commercial Glässer's vaccines that target specific strains of the disease, one of which also provides protection against enzootic pneumonia. Typically the vaccine would be administered to piglets at source, if the strain on your farm is covered by the product.

Specific farm (autogenous) vaccines are also widely used to control Glässer's disease. This vaccine is made from the strains present on that individual farm after laboratory diagnosis. Unfortunately this would be difficult in your situation due to the multiple sources of your pigs.

If you require further information and specific options with regards diagnosis, treatment and prevention of this disease, please speak to your veterinary surgeon.

Ask the vet . . .

Email your animal health questions to sophie.throup@xlvets.co.uk