A practical guide to differential diagnosis in swine

6 – Conjunctivitis

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Conjunctivitis can be caused by a variety of reasons. Here we describe some of the risk factors related to it and some useful tips for the differential diagnosis of this pathology.

Conjunctivitis is the inflammation of conjunctiva, a thin and delicate membrane that covers the eyeball and lines the eyelid.

Conjunctivitis is an extremely common eye problem because the conjunctiva is continually exposed to micro-organisms.

Also, environmental agents can cause infections or allergic reactions. The clinical signs can be seen in one or both eyes and, if caused by infection, can be very easily transmitted to other animals due to close physical contact.

Outbreaks may be associated with conjunctivitis infection Chlamydiae but there may be other manifestations of diseases such as influenza, Aujeszky's disease and Porcine Reproductive and Respiratory Syndrome (PRRS), among others. However, clinical and laboratory results are necessary to obtain the correct diagnosis.

Disinfection with most common detergents and disinfectants will inactivate Chlamydiaceae. Current infections are being treated with antibiotics. Generally, tetracyclines are the first antibiotics of choice to control it. In case Chlamydia suis is resistant to those, quinolones (enrofloxacin) or macrolides (erythromycin) could be the second choice.

Facilities with poor ventilation and poor environmental hygiene can also cause conjunctivitis. Improvement in environmental conditions is the key to solve the problem. The presence of some mycotoxins, especially trichothecenes, are sometimes related to this problem. From this group, the most frequently observed are deoxynivalenol (DON) and T-2.

In addition to the signs of conjunctivitis, intoxicated animals with trichothecenes will show other symptoms like vomiting, decrease in feed intake, reduced weight gain, weight uniformity in lots and high incidence of diarrhoea. The use of strategies for inactivation of mycotoxins, especially from the trichothecenes group, is important to control the situation. ■

Check list	Corrective action
Potential cause: MYCOTOXINS (Trichothecenes)	
• Chronic poisoning • Positive raw materials ELISA, feed HPLC	• Check raw materials and feed • Use Mycofix at suitable inclusion rate
Potential cause: ENVIRONMENT	
• Smell and lacrimation • Presence of high concentrations of toxic gases (NH_3 and H_2S) • Excess of powder and dust	• Adjust the conditions of hygiene, ventilation and relative humidity
Potential cause: CHLAMYDIA SUIS	
• Enteritis, pneumonia, pleuritis, pericarditis, arthritis, lameness, orchitis, uterine infection, late abortion, stillbirths, mummification • Carrier pigs, flies, dust, bird droppings	• Biosecurity • Hygiene • Disinfection • Antibiotics
Potential cause: PRRS	
• Periorbital oedema • RT-PCR, ELISA, Indirect Fluorescent Antibody Test (IFAT)	• Biosecurity • Vaccination
Potential cause: AFRICAN SWINE FEVER (ASF) AND CLASSICAL SWINE FEVER (CSF)	
• Vomiting • Epidemiology and clinical signs	• Biosecurity • Stamping out
Potential cause: INFLUENZA	
• Fever, lethargy, coughing, dyspnoea, infertility, decreased litter size, abortion, stillbirths • Epidemiology, clinical signs • RT-PCR and/or ELISA	• Vaccination • Anti-inflammatory drugs
Potential cause: AUJESZKY'S DISEASE	
• Keratoconjunctivitis, retinitis, optic neuritis, rhinitis, laryngitis, tracheitis, necrotising tonsilitis. • Epidemiology, clinical signs, dog or cat dead bodies • PCR, ELISA	• Biosecurity • Vaccination
Potential cause: MYCOPLASMA HYORHINIS	
• Reddening of conjunctiva, crusting of eye lid margin by exudation, tearing, polyserositis, rough hair, slight fever, depression, reduced FI, respiratory distress, abdominal cramp, lameness and swollen joints • PCR	• Antibiotics

References are available from the author on request.