

ERYSIPELAS

What is the disease?

Swine erysipelas is an infectious disease caused by the bacterium *Erysipelothrix rhusiopathiae*. It is seen mainly in growing pigs and characterised clinically by sudden death, fever, red blotchy 'diamond like' skin lesions, reluctance to move and pain on movement. In surviving animals, chronic infections may be seen as arthritis and heart lesions. The fever caused by this infection can induce abortion in pregnant gilts and sows.

This bacteria is also zoonotic and can be transferred to humans through open wounds. In humans, infection

causes an erysipeloid, a local skin lesion, which occurs mainly as an occupational hazard of abattoir workers, veterinarians and laboratory workers. The organism is occasionally isolated from cases of endocarditis in humans and rarely causes acute septicaemic disease.

How common is it on-farm?

The bacteria *E. rhusiopathiae* is part of swine flora found in the upper respiratory and intestinal tract of healthy pigs. It is considered that greater than 50% of pigs are carriers of this bacteria. The bacteria are also capable of surviving for prolonged periods in the environment and may also be found in other mammals and birds.

Signs & symptoms

Clinical signs of swine erysipelas can be divided into acute, subacute and chronic forms. Pigs with the acute septicaemic form may die suddenly without showing any clinical signs. Signs in acutely infected pigs could include:

- fever (temperature greater than 40°C)
- stiff gait
- reluctance to move (lying down)
- isolating themselves
- anorexia and thirst are common
- skin lesions may vary from red to purple widespread discolouration of the ears, snout and abdomen, to diamond-shaped skin lesions almost anywhere on the body.

Clinical signs of the subacute form include characteristic skin lesions, loss of appetite and a mild fever. In this form, the skin lesions may not persist for more than a few days.



Source: MINTRAC

The chronic form may follow acute, subacute or subclinical infection and is characterised by chronic disease, most commonly as arthritis. Endocarditis due to infection of the heart valves and lining may be evident occasionally and will be most obvious after stress, which may lead to sudden death.

Acute erysipelas cannot be easily differentiated clinically from other septicaemic diseases such as that caused by *Actinobacillus suis*, but the combination of previously mentioned symptoms is highly suggestive of Erysipelas.

How is it spread?

This disease is transmitted through oral-nasal exposure and subsequent invasion of the bloodstream. Causes of stress such as overstocking, mixing pigs after weaning and sudden changes in temperature, particularly on hot summer days, can trigger clinical erysipelas. Environmental contamination is common because bacteria are excreted via saliva, nasal secretions, faeces and urine. *E rhusiopathiae* can survive for weeks outside a host. Eco shelters with deep litter bedding on earth bases can allow an environmental build-up of bacteria.

Carcass impact

If an animal is affected by the acute form of the disease with erythema or if skin lesions or other disease

(arthritis, necrosis) is present the carcass is condemned. If only localized skin lesions are present in the absence of other disease, then carcass trimming of the affected area will occur. If lesions are present with some joint inflammation, the carcass may still be accepted after trimming if the remaining carcass is heat treated.

Treatment

Consult with your veterinarian before instigating treatment. Antibiotics will likely be required. Treatment early in the course of disease usually produces a dramatic improvement within 24-36 hours. There is no practical treatment for chronic swine erysipelas. Pigs affected by the disease and all animals within direct contact should also receive treatment; this is an effective method of control during acute outbreaks of this disease.

Prevention

Farms should have an erysipelas vaccination program for breeding stock and consider a program for progeny if there is a high challenge.

If disease breakdown occurs despite a vaccination program, review hygiene and management practices and consider changing to all-in-all-out production systems in consultation with your veterinarian.



Small raised, red diamond shaped lesions in a pig with erysipelas • Source: Holyoake & Fahy, Pig Research Centre