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Logo Design
Ruth Cronje, and Jan Swanson;
based on the original design by Dr. Robert Dunlop

Tail necrosis in piglets – case report

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Introduction

Tail necrosis in young piglets occurs occasionally in pig herds and shows little effect on health and weight gain. The first signs may be seen as early as one day of life until seven days and most injuries occur at the base of the tail. The main lesions are reddening around the tail that may progress to cyanosis and crust formation and the lesions may become necrotic (2). The cause is not yet clear, among the suspected factors are the effects of the T2 toxin, injuries to the tail, cold, contact with caustic substances, *Actinobacillus suis* infection (2), beta-hemolytic streptococcal infection (3) and poisoning caused by ingestion of *Claviceps purpurea* (1). The aim of this study was to report the occurrence of tail necrosis in piglets and assess their likely causes in two pig herds in the state of Rio Grande do Sul, Brazil.

Materials and Methods

The first study was performed in a pig unit with 1900 sows from PIC genetics (Herd A). A total of 25 litters with tail lesions were sampled, and 2 piglets of each litter were collected. The sows were housed in suspended farrowing crates with slatted floor and a heated creep area. Tail docking was performed in the piglets with a cauterizing device. Birth order, female genetics, sex and piglet age were recorded. After incision between the caudal vertebrae of the affected portions of the tail, swabs for bacteriological examination were collected. From 50 samples of the herd A, 25 were submitted for histopathological examination. The second study (Herd B) was a clinical evaluation of a litter from the experimental herd of the Swine Medicine Department from the School of Veterinary Medicine of UFRGS, Brazil. It comprised 10 sows from TOPIGS breed, housed in farrowing crates with solid floor and a creep area with a heat lamp. Tail docking was not routinely performed in this herd. Histopathology was performed in 2 of 8 affected piglets. Feed samples from both herds were submitted for mycotoxicological analysis.

Results and discussion

The first signs of the lesions were observed in one day old piglets, beginning with slight hyperemia in the basis of the tail. The lesions progressed to cyanosis, crust formation and necrosis in the distal portion of the tail, observed in older animals. The average age of the affected piglets was 4 days old and in approximately 10 days detachment of the necrotic portion was observed. In herd A, 31 piglets were males and 19 females and in herd B, 5 were males and 3 females. Lesions were mostly present in males in both herds, but sex and genetic influence could not be estimated because of the small size of the sample. Both herds had different floor in the farrowing crates and tail docking management, suggesting that these factors were not associated with necrosis of the tail in the investigated cases. In bacteriological examination *Streptococcus* sp. (19/50), coliforms (9/50), coliforms and *Streptococcus* (4/50) and *Staphylococcus hyicus* (3/50) were isolated. The main histopathological lesions were hydropic degeneration of the epithelium, necrosis of the epidermis, hyperkeratosis and acantholysis. Bacterial structure were observed in necrotic lesions, although it appeared to be secondary infection and not the main cause of the necrosis. Fungus of the genera *Fusarium* may produce dermatotoxins that can cause inflammation and necrosis in the skin (4). Analysis of feed samples collected for mycotoxicological analyses are in process, and the involvement of mycotoxins in the lesions observed in our study may be considered.

Conclusions

This report highlights the importance of taking into account several factors that may influence the outcome of tail necrosis in piglets. Genetic influence, docking management, farrowing crate flooring and gender are factors that may influence the lesion, but whose influence could not be detected in the present assessment. Histopathological findings suggest that the initial lesions were cutaneous necrosis beginning in the external epithelial surface. Further studies are required to define efficient measures to prevent and control tail necrosis lesions.

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