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TITLE

CASE REPORT: STREPTOCOCCUS SUIS AS A CAUSE OF KERATOMALACIA AND ENDOPHTHALMITIS IN A GROWER PIG

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CONTENT

Background

Streptococcus suis is an important zoonotic agent with an impact on pig and public health as well as the economy of the swine industry. Common signs of infection in pigs are meningitis, arthritis, endocarditis, and pneumonia.

Materials & Methods

A five-week-old newly weaned pig with a major eye lesion was euthanized on the farm and sent for necropsy. As is common practice on Swedish conventional pig farms, the pig was weaned at five weeks of age and had not been given any antimicrobial substances. It was kept in a large peer group on deep straw bedding. The farm has a previous history of eye lesions in grower pigs.

At necropsy, a swab was taken from the eye lesion and cultured on blood agar (5% bovine blood) and lactose purple agar incubated at 37 °C aerobically overnight, and on COBA medium incubated at 37 °C in 5% carbon dioxide overnight. Isolated bacteria were identified by MALDI-TOF MS.

Results

At necropsy, the main gross finding was a perforating corneal ulceration and keratomalacia of the left eye. Histological examination revealed a central ulceration of the cornea, with abundant neutrophils, fibrin and bacteria, and malacia of the corneal stroma. Purulent inflammation of the anterior, posterior and vitreous chamber (endophthalmitis) was also evident. Other findings were an acute mucoïd rhinitis, an acute interstitial pneumonia, and small abscesses in the umbilical area and in the musculature surrounding the right mandibula. Bacteria cultured from the eye lesion displayed alpha hemolysis on blood agar and COBA and were identified by MALDI-TOF MS as *S. suis*, with a score of 2.15.

Discussion & Conclusion

This case report shows that *S. suis* can cause keratomalacia and endophthalmitis in pigs. Endophthalmitis caused by *S. suis* has rarely been described in pigs; however, it is occasionally reported in humans.