

BBD-OP-04

TITLE

OUTBREAK OF “NEW” NEONATAL DIARRHEA IN A NORWEGIAN SWINE HERD - A CASE REPORT

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CONTENT

Background

Cases of neonatal porcine diarrhea (NPD) with unknown etiology have been reported from several countries during the past decade. Studies of this “New” neonatal porcine diarrhea (NNPD) in Sweden and Denmark have shown that NNPD seems to be associated with other pathogens than usually found in cases of NPD. In several cases, *Enterococcus hirae* has been cultured from the intestines, and abundant enteroadherent cocci have been demonstrated histologically. This case is part of a pilot study investigating if *E. hirae* could be a hitherto new cause of neonatal diarrhea in Norway.

Materials and Methods

In a multiplier herd in Telemark county, six 4-5 days old piglets with severe diarrhea were necropsied. Samples for histological examination were obtained from jejunum, ileum and colon. Swabs for microbiological examinations were obtained from jejunum and colon. In addition, rectal swabs were obtained from five diarrheic piglets and five healthy piglets from the same herd.

Results

Histological examinations revealed enteroadherent Gram positive cocci in jejunum and ileum in five of the six necropsied piglets. Another common finding was swollen enterocytes with vacuolated cytoplasm in the apical villi. Three piglets had multifocal necrosis in the jejunal and/or ileal mucosa, and two piglets had mucosal necrosis in colon.

Microbiological examination of jejunum and colon from the necropsied piglets revealed *E. hirae* and *E. coli* from five piglets. From the rectal swabs from diarrheic piglets, *E. hirae* was demonstrated in two samples. From the other three diarrheic piglets, the five healthy piglets and the sixth necropsied piglet, a mixture of bacteria was cultured.

Discussion

In accordance with studies from Sweden and Denmark, the results in this case indicate that *E. hirae* plays a role in NNPD. The knowledge about the pathogenesis of *Enterococcus*-associated diarrhea is sparse, and further studies are essential to elucidate the etiology of NNPD.