Sponsors

University of Minnesota
College of Veterinary Medicine

College of Food, Agricultural and Natural Resource Sciences

Extension Service

Swine Center

Thank you to **IDEXX Laboratories** for their financial support to reproduce the conference proceeding book.

Production Assistant
Janice Storebo

Formatting
Tina Smith

CD-ROM
David Brown

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

Control of neonatal PCV2-diarrhea in Denmark by vaccinating sows with Circovac®

Uffe Nielsen, Solsortevej 8, 7480-Denmark. un@lvk.dk

Introduktion.

Virus-diarrhea in Denmark is by definition a sudden onset of diarrhea within 5-6 days after birth. High morbidity and high mortality if no intervention. The pigs in the affected litters are heavily medicated with antibiotics to control secondary bacterial infections. As sudden as it starts it disappears. About 3 days after the disease has disappeared it is impossible to see any signs of disease.

This syndrome was first diagnosed in 1985 (1) and it was later stated that the cause was rotavirus.

For many years, feed-back of faeces was good practice and this preventive tool worked in about 85% of the herds.

However, from 2005 an on, more and more cases of virus-diarrhea were diagnosed by veterinarians. Pigs and faeces-samples shipped to laboratory showed Clostridium perfringens type A, and a non-haemolytic *E.coli*.

In many of these Danish sow-herds vaccination procedures were then changed from vaccines containing *Clostridium perfringens type C, (Cl.p C*) to vaccines with *Cl.p A.* These vaccines worked only well in about 40% of the herds.

Late 2006 about 960 herds (about 30%) in Denmark vaccinated sows with a Cl.p.typeA vaccine.

Many veterinarians have never believed that Cl.p.A is a primary pathogen.

Materials and Methods

Summer 2007 I had 6 herds suffering from virus-diarrhea. In 2 of these herds virus-diarrhea was only seen in first-litter sows as they bought gilts to the herd. In the other 4 herds it was all parities that suffered.

As usual we started with the feed-back procedures – but now we did not see any benefit from this strategy !

However it was obvious that it was a virus-induced diarrhea, so it was easy to think that it might be a PCV2 induced diarrhea.

Laboratory investigations shoved still *Cl.p.A* and a nonhaemolytic *E.coli*.

However, all 6 herds had a previous history of PCV2 infection, either with PMWS and/or reproductive failure.

It was decided to vaccinate sows 3 to 4 weeks before farrowing with Circovac® from Merial.

Results:

Two months after start of vaccination the herdsmen could tell that the virus-diarrhea was easier to control.

Three months after, it was reduced to about 5% of the litters and 5 months after start of vaccination it was impossible to see any sign of virus-diarrhea in all six herds.

Same results were later seen in many other Danish sow-herds.

Conclusion:

The so-called virus-diarrhea in Denmark has changed in the last years from a rotavirus infection to a PCV2 induced infection – at least in these herds.

Discussion:

This is the first time that control of PCV2 induced neonatal diarrhoea has been described in Denmark.

The pathogenesis it not clear, but it is believed that there is a massive load of PCV2 virus in sow colostrum.

Also in the US, virus-diarrhea is controlled with success with a PCV2 vaccine (2).

So in Denmark a PCV2 vaccine was the “Silver Bullet” for Cl.p.A infections (3).

References

1: K.E.Navntoft (2007), Personal communication.
2: Peter Christensen (2008), Personal communication.
3: Scanlon Daniels (2007), Allen D. Leman Swine Conference: 70-71.