

Technical University of Denmark



Rotavirus type A associated diarrhoea in neonatal piglets: importance and bodydynamics

Moeller, C. B.; Rasmussen, Martin; Hjulsager, Charlotte Kristiane; Kongsted, H.; Hansen, C.; Larsen, Lars Erik

Publication date:
2017

Document Version
Publisher's PDF, also known as Version of record

[Link back to DTU Orbit](#)

Citation (APA):
Moeller, C. B., Rasmussen, M., Hjulsager, C. K., Kongsted, H., Hansen, C., & Larsen, L. E. (2017). Rotavirus type A associated diarrhoea in neonatal piglets: importance and bodydynamics. Abstract from 9th European Symposium of Porcine Health Management (ESPHM 2017), Prague, Czech Republic.

DTU Library

Technical Information Center of Denmark

General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.



VVD-046 - ROTAVIRUS TYPE A ASSOCIATED DIARRHOEA IN NEONATAL PIGLETS: IMPORTANCE AND BIODYNAMICS

C.B. Moeller¹, M. Rasmussen¹, C. Hjulsgaard¹, H. Kongsted², C. Hansen³, L.E. Larsen¹

¹ Technical University of Denmark, National Veterinary Institute, Frederiksberg C, Denmark

² Aarhus University, Institute of Animal science- Department of Epidemiology and management, Tjele, Denmark

³ Danish Agriculture and Food Council, Pig Research Centre, Copenhagen V, Denmark

Background

Rotavirus A (RVA) is a well-known cause of diarrhoea in piglets, but the infection dynamics and clinical impact are not fully elucidated. The aim was to determine the significance of infection with RVA in relation to neonatal diarrhoea.

Material/Methods

Two commercial swine herds with neonatal diarrhoea and a positive RVA diagnosis were included. Five litters from each of two herds and a total of 132 piglets were sampled. The animals were subjected to a daily clinical examination and faeces were collected daily from all piglets. The piglets were weighed at beginning and at the end of study. The outbreak day was defined as the day where >25 % of the litter showed clinical diarrhoea, and for all litters this was either the 4th or 5th day of life. On outbreak day, fecal samples from all piglets in the litter were analysed for RVA together with samples collected two days prior to outbreak day from 54 of the 132 piglets. The analyses were made by a RVA specific RT-qPCR. Virulent E. coli was ruled out by PCR as differential diagnosis in all litters by testing a pooled sample on the outbreak day.

Results/Discussion

In total, 43%(57/132) of the piglets had clinical diarrhoea and 66%(87/132) were positive for RVA on the outbreak day. For comparison, 89%(51/57) of the diarrheic piglets and 48%(36/75) of the non-diarrheic piglets were positive for RVA which was significantly different ($P < 0.001$). Piglets that tested negative for RVA had a higher weight gain over the 4-day period (mean 363g vs. 278g, $P < 0.05$) despite that the positive piglets had a significantly higher birthweight (mean 1,45kg vs. 1,27kg, $P < 0.05$). Furthermore, 63%(34/54) of the piglets developed diarrhoea within 24 hours after a positive RVA diagnosis. The results confirmed that RVA has a significant impact on incidence of diarrhoea and weight gain also in E. coli negative litters.