



Survey of risk factors in MMA problem farms combined with intervention measures to reduce the incidence of MMA and reduce antibiotic use in dams, suckling and weaned piglets.

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Key words

PPDS/MMA, herd health management, animal health, reduction of antibiotics, risk factors, treatment incidence

Aim of the study

The study was performed to (i) identify risk factors for Mastitis Metritis Agalactia (MMA)/Postpartum Dysgalactia Syndrome (PPDS); (ii) establish an intervention program to reduce the MMA/PPDS prevalence and the Treatment Incidence (TI); (iii) verify the measurement of Acute-Phase-Proteins in blood as a diagnostic tool.

Material and methods

The study was conducted on 61 breeding farms. In 31 farms more than 12 % of the sows were affected with MMA/PPDS (affected farms) and 30 farms had a MMA/PPDS prevalence less than 10 % (non-affected farms). For site visits self-administered questionnaires were used to collect data on management and hygiene, housing, feeding and treatment of MMA/PPDS. Affected and non- affected farms were compared to each other to identify risk factors for MMA/PPDS. In order to compare the amount of antibiotics use, the treatment incidence (TI) was calculated. An intervention program to reduce the MMA/PPDS prevalence and the TI was conducted on 30 affected farms. To verify MMA/PPDS blood from 100 MMA/PPDS affected and 100 MMA/PPDS non-affected sows, no longer than 72 h p.p., were collected to analyse Acute-Phase-Protein, using ELISA test-kits for Serum-Amyloid-A, C-reactive Protein and Major acute Phase Protein.

Results and significance

Important identified risk factors were the integration of gilts into the herd after the first farrowing, constipation of gestating sows as well as soiled troughs in lactating sows, a low flow rate in drinking nipples (less than 2 litres/min) and a high prevalence of lameness. The TI was also significantly different between affected and non-affected farms. An intervention program was implemented in 30 affected farms. The MMA/PPDS-prevalence decreased in 20 farms but the TI did not decrease significantly, because on some farms the dosage as well as the duration of the antibiotic treatment has been corrected. The most effective procedures to decrease the MMA/PPDS-prevalence were the use of a supplementary feedstuff before parturition, optimization of the PPDS-diagnostics and the use of NSAID and Oxytocin for the MMA/PPDS-treatment. The results of the Acute-Phase-Protein measurement showed a significant difference in the Major acute Phase Protein between affected and non-affected sows. However, the scatter was quite large, therefore further studies have to be done to estimate the influence of litter size, duration of farrowing and birth weight of the piglets on the Acute-Phase-Protein titers.

Publications, posters and presentations

Jenny, B.; Vidondo, B.; Pendl, W.; Kümmerlen, D.; Sidler, X. (2015) Erhebung von Risikofaktoren für Mastitis-Metritis-Agalaktie in Schweinebetrieben in der Schweiz. Schweiz. Arch. Tierheilk. 157, 689-696.

Pendl, W.; Jenny, B.; Sidler, X.; Spring, P. (2015) Antibiotikaeinsatz beim Schwein: Erste Resultate aus dem Projekt FitPig. In: Gesunde und leistungsfähige Nutztiere ETH Fachtagung.

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