

Facilitating nursing behavior of sows at farrowing has a positive effect on colostrum distribution

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Introduction

Farrowing is a stressful event for sows, especially first parity sows. In the most severe cases this leads to aggression and savaging of newborn piglets. Next to clear aggression, there is a range of less explicit unwanted behavior, negatively impacting the possibility for the piglets to take up colostrum. Bottle fed piglets ingest more colostrum in the first day than naturally nursed piglets (1), indicating that the sows is a limiting factor for colostrum intake.

Our investigations show that colostrum distribution is correlated with piglet survival. We were also able to demonstrate that with an injection of azaperone of the sow just after farrowing, resulted in an increase of calm behavior and in an increase of number of piglets suckling during the first hours after farrowing.

The aim of this pilot study was to investigate if an injection of azaperone (Stresnil®) at the end of the partus has a positive effect on colostrum distribution.

Materials and Methods

In a commercial sow farm, 193 first and second parity litters were included in the study. The day time litters (n=98) were injected 320 mg of azaperone IM (8 ml Stresnil®) at the moment of expulsion of the placenta. The night time litters (n=95) were not treated. Gestation length and the number of piglets born total, born alive, fostered (+/-), dead and weaned were recorded. All normal farm procedures were continued. At tail docking (day 3 post partum) a blood drop of the remaining tail bud from 6 randomly chosen litter mates was sampled. The samples were analyzed with a DAS-ELISA test (2) (Colostrum Quality Counter™). Piglet serum IgG concentration after gut closure can be used as a parameter for colostrum intake (3). In order to compare the distribution of colostrum between sows, the coefficient of variation of the piglet serum IgG (CV IgG) was calculated. This is the standard deviation divided with the average of the litter.

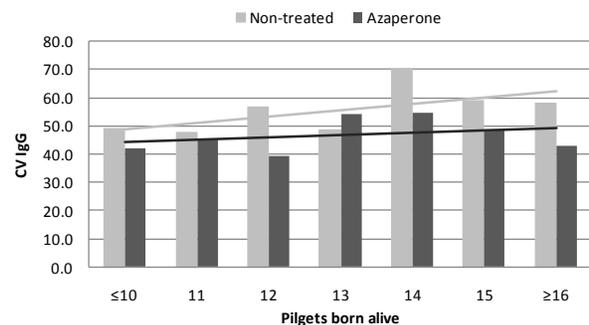
The statistical analysis was performed with the SAS® program. A t-test on the log-transformed data was performed.

Results

The mean (\pm standard deviation) of colostrum distribution (CV IgG) of the piglets of treated sows was 46.9 (\pm 20.4) compared to 55.2 (\pm 32.2) for non-treated

sows. The difference is nearly statistically significant ($p < 0.07$). There was no difference in colostrum distribution between first and second parity sows. Figure 1 shows the relation of variation in colostrum intake and the number of piglets born alive. The variation increases with litter size in non-treated sows, while the variation does not differ between litter sizes in the azaperone treated sows.

Figure 1: Impact of number born alive on CV IgG



Discussion

The results demonstrate that the behavioral change of the sow after injection of azaperone results in a better distribution of the available colostrum amongst the piglets. Increasing number of piglets born alive per litter had a negative impact on colostrum distribution in the non-treated group. In litters where the sow was treated with azaperone, the distribution of colostrum was not affected by the number of piglets born alive. This confirms earlier findings that the sows is a limiting factor for colostrum distribution.

In this study, it was shown that one injection of azaperone to the sow at the moment of expulsion of the placenta, improves colostrum distribution amongst her piglets. The challenges caused by poor colostrum distribution are more relevant in high productive farms.

References

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