P08.049

EFFECT OF METACAM® (MELOXICAM) ON POSTFARROWING SOW BEHAVIOUR AND PIGLET PERFORMANCE

Introduction

Pain caused by farrowing is a welfare problem and may substantially modify the normal behaviour of sows during and after parturition. This, in turn, may have negative effects on production performances of sow and piglets. Previous studies have shown that analgesics have the potential to reduce pain caused by farrowing. However, most of the studies done so far have looked at narcotic analgesics (1). The aim of this study was to investigate the effects of meloxicam on behaviour of sows postfarrowing and piglet performance. Meloxicam is a non-steroidal anti-inflammatory drug (NSAID) used for the treatment of MMA and locomotor disorders in pigs.

Materials and Methods

Forty eight hybrid (LW x Ld) sows (24 gilts and 24 sows) housed in individual crates were used during 6 experimental periods. In each period sows were randomly allocated into two homogeneous groups regarding parity and treated with either meloxicam (Metacam® 20mg/ml inj. sol.; Boehringer Ingelheim) IM, 0.4 mg/Kg BW or saline solution as placebo (2). Metacam® and saline were administered 1 ½ hours after the birth of the last piglet. Sow activity (defined as time spent standing versus time spent lying, and number of posture changes) was registered continuously for 3 days before and 3 days after farrowing using automatic sensors previously validated (3). Overall, 583 piglets were individually weighed at farrowing and at weaning. SAS software package was used for the analysis and significance level was established at $p<0.05$.

Results

Multiparous sows spent less time lying during the 3 day period postfarrowing in the treatment group compared with the control ($p<0.05$). Differences were statistically significant on days 2 and 3 after farrowing (Figure 1). There was a tendency towards sows in the treatment group to have a higher number of position changes during the 3 days postfarrowing, compared with sows in the control group ($p<0.1$).

In litters from multiparous sows, piglets of low birth weight (defined as percentil25: BW<1,200 g) had an average daily gain significantly higher in the treatment group than in the control (202.14 g/day and 173.7 g/day, respectively; $p<0.05$) (Figure 2). Piglet mortality was not significantly different between treatment and control groups. Piglet mortality was not correlated with the amount of time sows spent lying or with the frequency of changes of posture.

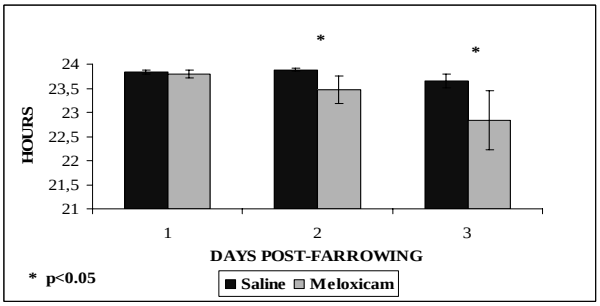

Figure 1. Total lying time (mean±SE) in multiparous sows during the postfarrowing period.

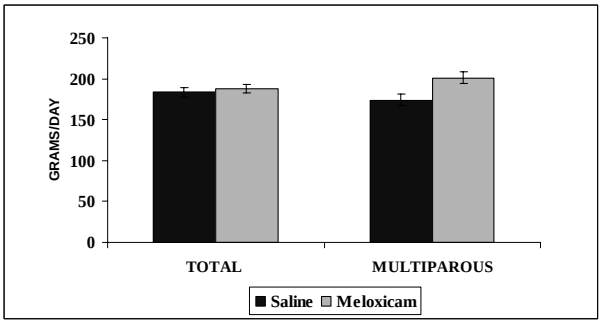

Figure 2. Average daily gain (mean±SE) in the low birth weight piglets.

Discussion

Our results show that Metacam® has an important effect on the behaviour of sows, causing an increase in their activity on the first few days postfarrowing when compared with non-treated sows. This is important for two reasons. First, reduced activity may be a consequence of discomfort and pain. Therefore, it can be suggested that the effect of Metacam® on sow behaviour is a consequence of its analgesic effect. If this is the case, Metacam® can be seen as having a positive effect on the welfare of sows. Secondly, it has been shown that sows with low piglet mortality are more active on day 3 post-farrowing (4). One possibility is that more active sows have a higher water intake and consequently produce more milk (5). Therefore, by increasing sow activity, Metacam® has the potential to increase average daily gain of small piglets.

References

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