Farrowing culling and therapeutic injections rates in litters from sows treated with Metacam®

D. Guiñez[1], C Gutierrez[2,3], V. Grosse-Liesner[4], C Roudergue[3], A. Ruiz[1,2]

[1]Facultad de Ciencias Veterinarias, Universidad de Concepción, Chile; [2]Doctorado en Ciencias Agropecuarias, Escuela de Postgrado, Universidad de Concepción, Chile; [3]Boehringer Ingelheim Animal Health GmbH; [4]Private Consultant

danielaguinez@udec.cl

INTRODUCTION

Farrowing is a critical period for the sow in which painful, inflammatory and infectious processes along with other systemic events cause post-partum stress and may trigger Postpartum Dysgalactia Syndrome (PPDS) which manifests itself either in clinical or subclinical presentation, both with negative impact on the sow and its litter regarding the development of suckling pigs. NSAIDs are a pharmacological group widely used in veterinary medicine due to their anti-inflammatory, analgesic and antipyretic properties. Among these Metacam® with its active ingredient meloxicam – a COX-2 selective inhibitor - applied at the end of farrowing has proven to be effective and safe on PPDS control[1], improvement of sow welfare and behavior[2], and overall milk and colostrum intake for piglets during the first days of life[3]. The objective of this study was to determine under field conditions the effect of meloxicam in litters from sows of a farm with subclinical PPDS in terms of piglets culling rate and the number of therapeutic injectable medications that took place during the farrowing period.

MATERIALS AND METHODS

The study took place on a multi-site intensive farm and it considered a total number of 265 sows and 3077 piglets. Sows were divided into two experimental groups, Group A (n = 127 sows) was treated with meloxicam 5 ml IM and Group B (n = 138 sows) was injected with saline solution 5 ml IM to serve as non-treated control group. One hour after farrowing each piglet was individually identified with numbered ear tags and cross fostering was restricted to first 24 hours within litters from the same treatment group. A research coordinator monitored the experience from farrowing to weaning. The number of culled animals was documented alongside the number of therapeutic injectable medications on an individual level for each group. The experimental unit was the litter, chi-square test was used to assess differences of culled animals and a significance test for independent proportions was used to assess the number of therapeutic injectable medications between groups.

RESULTS

Piglets in the saline group had a greater culling rate than in the meloxicam group (Table 1).

Table 1: Culled piglets by experimental group

	Metacam® (n 1504)	Control (n 1573)
Culls	18[a]	34[b]

a,b: Different letters indicate a statistically significant difference (p < 0,05).

Overall, the number of therapeutic injections applied in relation to the total number of piglets per group was 20 % for the Metacam® group and 25 % for the control group (Table 2).

Table 2: Therapeutic medications in experimental groups

	Therapeutic	Injections (n)
Clinical Disorder	**Metacam®**	**Control**
Arthritis	43	45
Diarrhea	261[a]	348[b]

a,b: Different letters indicate a statistically significant difference (p<0,05).

DISCUSSION AND CONCLUSION

This farm did not have clinical PPDS cases but was interested in assessing the potential of improving productive performance by using meloxicam after farrowing as a standard operation procedure in order to control subclinical cases of PPDS.

The litters from sows treated with Metacam® performed better in culling rate and therapeutic injections rate from birth to weaning (21 days average). The differences found on both variables could be related to a sow with less pain and inflammation after farrow resulting in a greater availability of milk and colostrum for the piglets during the critical starting process of lactation[5]. These results are in line with previous research[6,7] and further confirm the value of controlling lactation disorders during the first critical hours for piglets colostrum and milk intake.

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