

The effect of meloxicam administration on the behaviour of piglets after castration

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Introduction

Unanaesthetized piglet castration is a painful routine management practice, which should be replaced because of animal welfare concerns.

Objectives

Investigating the possible effect of an analgetic (meloxicam) administered at the time of castration on the behaviour of piglets afterwards.

Materials and methods

Animals and housing

- 154 hybrid piglets (Piétrain x Hypor), heterozygous for the halothane gene
- Farrowing house is temperature controlled through floor and air heating

Experimental design

- All piglets were castrated on the same day, within the first week of life.
- Control group: piglets castrated without anaesthesia/analgesia.
- Experimental group: meloxicam p.o., 0.2 mg/kg, 1.5 mg/ml, and then castrated.

Behavioural observations

- Based on an ethogram described in literature.
- All piglets were observed 10 min. before noon and 10 min. in the afternoon.
- Behaviour was scored on the day of castration and 4 subsequent days.

Results

Table 1: pain related behaviour for all observation periods (mean $\pm$ s.e.m.). Within a row, means with a different superscript differ.

	Meloxicam-group	Control group
Day 1 am	0.0622 $\pm$ 0.0210	0.0348 $\pm$ 0.0145
Day 1 pm	0.0162 $\pm$ 0.00726	0.0152 $\pm$ 0.00883
Day 2 am	0.235 $\pm$ 0.0693 ^a	0.0212 $\pm$ 0.0104 ^b
Day 2 pm	0.157 $\pm$ 0.0404	0.0894 $\pm$ 0.0308
Day 3 am	0.408 $\pm$ 0.0832	0.0576 $\pm$ 0.0199
Day 3 pm	0.200 $\pm$ 0.0504	0.0424 $\pm$ 0.0131
Day 4 am	0.108 $\pm$ 0.0370	0.0273 $\pm$ 0.00899
Day 4 pm	0.0405 $\pm$ 0.0255	0.0212 $\pm$ 0.0113
Day 5 am	0.0351 $\pm$ 0.0165	0.00909 $\pm$ 0.00669
Day 5 pm	0.0405 $\pm$ 0.0113	0.0697 $\pm$ 0.0215

— No differences in pain related behaviour the first 10 minutes after castration (day 1 am), nor a few hours later (working time analgetic).

No behavioural differences between the two groups looking at the overall period of observation.

Table 2. Interactive behaviour for the overall period of observation (mean $\pm$ s.e.m.)

	Meloxicam-group	Control group
Overall period of observation	0.219 $\pm$ 0.0238	0.248 $\pm$ 0.0323

— No differences in interactive ('positive') behaviour

Conclusion

Administration of meloxicam, the timing and dose as used in the present study, does not alter the pain related behaviour after castration.

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