

Optimizing injection anaesthesia for castration of piglets

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Key words

Piglet, Castration, Anaesthesia, Analgesia, Romifidine, Ketamine, Butorphanole, Azaperone

Aim of the study

This study aimed for finding an injectable anaesthesia method for 8-14 days old piglets with sufficient anaesthesia quality (no reaction to surgical stimuli) followed by a good, quiet recovery phase that lasted no longer than two hours.

Material and methods

Initially different combinations of Romifidine (Ro), Ketamine, Azaperone (Aza) and Butorphanole (But) were prospectively and blinded compared with the Standard Ket, Aza and But. All anaesthesias and recoveries were insufficient. It was decided to establish suitable doses of Ro, Ket and Aza in the following trials with constant dose of But. It was known that Ket leads to disturbed recoveries, the sedation of Aza lasts several hours and $Ro < 0.2 \text{ mg / kg}$ in pigs smaller than 11 kg of bodyweight leads to sedation and analgesia. Therefore a dose-flowchart was developed. With help of this flowchart further doses were decided depending on anaesthetic depth and recovery scores. If two piglets in a trial group had an insufficient depth of anaesthesia or recovery phase the next dose in the flowchart was chosen.

The aim was with addition of Ro to establish minimal doses of Ket to reach calmer recoveries. The dose of Aza was also tried to be minimized to shorten the duration of recoveries.

Before castration all male piglets were separated from their mother. Then 4-8 piglets (depending on litter size and available boxes on the farm) were intramuscularly injected with the medicals that had to be tested. All piglets received Metacam (0.4 mg / kg im). In case of insufficient analgesia 0.5 ml of lidocaine 2% was injected into the testicles.

The initial doses tested were $1 \text{ mg / kg Aza} + 15 \text{ mg / kg Ket} + 0.2 \text{ mg / kg Ro}$.

Results and significance

Six field trials with totally 73 Swiss Land-race piglets 8-14 days old were performed. The tested doses were: 1, 2 or 3 mg / kg Aza, 10 or 15 mg / kg Ket and 0.15 or 0.2 mg / kg Ro. None of the tested combinations led to a sufficient anaesthesia and a quiet recovery phase of acceptable length. In conclusion it has to be stated that even with Romifidine in addition to the so far used Azaperone, Ketamine and Butorphanole no acceptable anaesthesia and recovery quality for the piglets can be reached.

Publications, posters and presentations

Doctoral thesis and publication in Schweizer Archiv für Tierheilkunde (SAT).

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