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EXPERIENCES WITH THREE INJECTION COCKTAILS OF GENERAL ANESTHESIA USED FOR PIGLETS PRIOR TO CASTRATION

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Introduction

To improve the animal welfare in the pig production, Denmark made a national agreement to stop castration without anesthesia by the end of 2018. Since the knowledge about general anesthesia of piglets is limited, the aim of this pilot study was to obtain experiences of general anesthesia of piglets prior to castration in conventional production facilities.

Material&Methods

A total of 25 male piglets, aged 4 days, were anesthetized with one of three different anesthesia cocktails(AC) and castrated in a conventional Danish pig production herd. All AC's contained ketamine as the anesthetizing agent and were injected intramuscularly in the piglets' necks. The compounds of the three AC's and doses are listed below:

- AC-1, n = 10: 15 mg/kg ketamine, 5 mg/kg azaperone, 0.2 mg/kg butorphanol
- AC-2, n = 10: 13 mg/kg ketamine, 2 mg xylazine
- AC-3, n = 5: 4 mg/kg ketamine, 0.08 mg/kg medetomidine, 0.22 mg/kg butorphanol

The piglets were castrated during unconsciousness, which is defined as the loss of all three reflexes; palpebral reflex, jaw tone, and muscle tone, or no later than 20 minutes post injection. Movements or/and vocalizations during the castration as well as the recovery period for each cocktail were observed. The piglets were euthanized after having suckled once after the anesthesia or if the recovery time exceeded 3 hours.

Results

The recovery time for each AC:

- AC-1: 130-186 minutes (10*/9**/5***)
- AC-2: 65-182 minutes (10*/10**/9***)
- AC-3: 169-183 minutes (5*/4**/2***)

Numbers in parenthesis are the total number of anesthetized piglets*/number of piglets able to stand within 3 hours**/number of piglets which suckled within 3 hours***. Only AC-1 provided a sufficient pain relief as none of the piglets anesthetized made any pain behavior during castration.

Conclusion

Considering the long recovery time and insufficiency to relieve pain, none of the AC's are considered ideal to use for piglets.