Experiences with intravenous general anaesthesia for surgical castration of pigs

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Objectives

General anaesthesia during castration was used at the Teaching and Research Farm of the University of Veterinary Medicine, Vienna for following reasons:

- Reduces pain for piglets during castration
- Facilitates teaching of
  - Injection techniques
  - General anaesthesia and
  - Castration of piglets

It was the aim of this study to evaluate the effects of this procedure regarding practicality, costs and clinical parameters.

Animals and Methods

Herd of approx. 30 group housed Large White Sows, farrowing in crates and free farrowing pens (FAT2), no routine teeth clipping or tail docking;

- **During three years**
  - 1047 piglets routinely castrated by vet students
  - detailed data collection of castrations of further 93 piglets
- **Review** of productivity data (computerised) and treatment records; qualitative and semiquantitative recording of procedure (time, costs, practical challenges)
- **Median age**
  - at castration: 18 days (6-33 days)
  - at weaning: 28 days
- **General anaesthesia**
  - 2 mg/kg Azaperon, 25 mg/kg Ketamin
  - 571 piglets i.m., 476 piglets i.v.
- **Castration:**

1. Intravenous injection into ear vein

2. Two vertical incisions of scrotum

3. Removal of testes and epididymes using an ‚emasculator' : Tool for cutting and crushing)

4. Wound treatment with antibiotic spray; Separation in boxes until completely awake (1-3 hours).

Results

Clinical Parameters

- **Mortality** generally very low – overall 7 animals out of 1047 (0.67 %) died during or shortly after castration (0.88 % i.m., 0.42 % i.v.)
- None of the piglets crushed by sow
- In approx. 50% of pigs parts of anaesthetics injected paraveinously
- Depth of anaesthesia inadequate in 50% of piglets measured with pedal reflex and jaw tone

Practicality

- **Handling piglets for injection, moving them** into recovery boxes, monitoring and returning into farrowing pen additional effort
- **Additional time for** i.v. injection: **76 seconds** (30-185 sec)
- **Additional costs** for Ketamin/Azaperon: **0.74 €/piglet**

Conclusion

Application of this method:
Small farms or special assurance schemes where a veterinarian visits routinely for injecting the animals, followed by castration by the farmer (and additional pain relieve).

BUT:

LITTLE BENEFIT for
Welfare of piglets (stress during handling, recovery, potentially inadequate depth of anaesthesia, post operative pain relieve necessary)
High additional costs for anaesthetics, time, additional effort for exact dosing, injection and handling of piglets.

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