

Surveillance of piglet castration in Switzerland

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Key words

Injection anaesthesia, Inhalational anaesthesia, Piglet, Castration, Surveillance, Animal welfare

Aim of the study

The objectives of this study are a description of the practical implementation of the painless castration under inhalational anaesthesia or injection anaesthesia in Switzerland with an objective assessment of animal welfare, workplace safety and additional expenses

Material and methods

600 questionnaires were sent to Swiss pig farmers using either inhalational or injection anaesthesia on their farms. 183 questionnaires could be evaluated to the topic inhalational anaesthesia and 60 questionnaires concerned the injection anaesthesia. 100 farms using inhalational and 30 farms using injection anaesthesia were visited between June 2011 and Mai 2012 during castration process. Those, 130 farms were chosen out of a randomized pool of 185 farm data's.

Results and significance

Inhalational anaesthesia

14% of the piglets were castrated under insufficient anaesthesia. 44% of the visited farmers administered the analgesic shortly before or during castration, instead of 15 minutes in advance. The mortality rate was less than 0.1%. A quarter of the asked swine farmers had concerns about their own safety and 22% reported a headache or dizziness during castration work. The Isoflurane levels on 2 farms were above the Swiss limit. The expenditure of time was with 4.3 minutes distinctly above the time level which is used without any anaesthesia. The additional financial expenses and time are at the moment not adequately compensated to the farmers.

Injection anaesthesia

34% of the piglets showed movements during castration under injection anaesthesia and 17% had excitations during recovery from anaesthesia. After 48 minutes half of the piglets were in sternal position and after 112 minutes half of them showed coordinated movements. Body temperature decreased by 3.1°C until 60 minutes after castration, especially small piglets reached critical temperature levels. 38% of the piglets showed strong bleeding after castration. The healing of the wound was good according to 82% of the farmers. 83% of the farmers reported piglet losses, especially at the beginning of the anaesthesia period. The anaesthesia may be improved by using Butorphanol in addition to the combination of Ketamine and Azaperon.

So the animal welfare using inhalational anaesthesia can be improved, but is acceptable. About the workplace safety are still concerns and the expenses are much higher than before and they are not adequate compensated. Regarding the amount of insufficient anaesthesia by injection and the losses of piglets, the animal welfare aspect has to be improved. The workplace safety is no problem, but the additional expenses are high, even higher than using inhalational anaesthesia.

Publications, posters and presentations

Enz, A.; Schüpbach-Regula, G.; Bettschart, R.; Fuschini, E.; Sidler, X.; Erfahrungen zur Schmerzausschaltung bei der Ferkelkastration in der Schweiz – Teil 1: Inhalationsanästhesie. Schweiz. Arch. Tierheilk. 2013,

Enz, A.; Schüpbach-Regula, G.; Bettschart, R.; Fuschini, E.; Sidler, X.; Erfahrungen zur Schmerzausschaltung bei der Ferkelkastration in der Schweiz – Teil 2: Injektionsanästhesie. Schweiz. Arch. Tierheilk. 2013,

Project 2.11.02

Project duration January 2011 – October 2012