

Effects of the age of surgical castration on welfare of piglets

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Abstract

The application of the surgical castration in different ages in different farms under Sri Lankan conditions was identified as a serious welfare problem and the study was conducted to evaluate the effects of four selected ages on welfare of young piglets by observing their behaviours and to suggest a suitable age among them for Sri Lankan conditions. The experiment was conducted in NLDB Pig Breeding Unit at Walisara. The four ages checked were, 1. Surgical castration on day 7 of birth, 2. Surgical castration on day 14 of birth, 3. Surgical castration on day 21 of birth 4. Surgical castration on day 28 of birth. For each treatment three replicates were used.

Twelve Duroc pregnant sows having more than 75% Duroc blood from three different parities, gilt, 4th parity and 5th parity were selected for the experiment and were assigned to separate pens. Just after each farrowing the litter was notched, birth weights were recorded and a programme schedule was prepared. Each litter was weighed in every 7 days interval up to weaning (0-42 d) in individual basis. According to the treatment, in a pre-determined day, the surgical castration and sham castration were applied to randomly selected male animals. Just after the castration the observations were started and continued for three consecutive days following castration. The observations were taken every 5 minutes intervals for 3 hours in the morning and 2 hours in the afternoon according to the ethogram. At the same time the position of the piglets in the pen was also observed and was recorded in every 15 minutes intervals. After the observation period (on third day of castration) each litter was weighed.

The observations (Sleeping, sleeping postures, position in the pen and pain related behaviours, lying – without sleeping behaviour and suckling behaviour) were analyzed using SAS version 6.12 computer package. The castration and sham castration had no significant effect on sleeping behaviour, sleeping postures, position in the pen or pain related behaviours in all four ages of castration. But just after castration in treatment 1, pigs have shown the highest sleeping behaviour and pigs in treatment 4 have shown the least. The least lateral recumbency posture at sleeping has observed in treatment 4 and the highest in treatment 1. In treatment 2 (surgical castration on day 14 of birth) the average behaviours (LE/SL, LR/SL) of both castrated and sham castrated male pigs were mostly the same. Also just after surgical castration they have stayed at the corners

more frequently. Surgical castration on day 7 after birth has given the least pain related behaviours (shivering, rapid respiration) for young male pigs than other ages. But considering the suckling behaviour just after castration, the castrated males in treatment 2 (castration on day 14 of birth) had shown the highest suckling behaviour over sham castrated males than other treatments.

This study concludes that surgical castration on day 7 after birth has given the least pain related behaviours at the surgical procedure but in economic aspects, castration on day 14 of birth is the best, because suckling is important for the growth and the development of immune system. For Sri Lankan conditions can suggest surgical castration on day 7 after birth considering only the welfare aspects of young male pigs and considering both economic and welfare aspects can suggest the treatment 2 (surgical castration on day 14 of birth). Surgical castration on younger ages was found to be more suitable than older ages of young male pigs.

Keywords: Surgical Castration, Piglets, Welfare, Husbandry