Technical Note: Castration of m*ale* bred grass-cutter (*Thryonomys swinderianus)*

MENSAH G. A., HOUINATO M., KOUDANDE O. D., BEMBIDE C., DOSSOU-GBETE G.S.O., MENSAH S. E., POMALEGNI C. B. et KPERA G. N.

Introduction

Grass-cuter sexing can be done by observing the ano-genital area. In adults, the ano-genital distance of the male (figure 1) is almost the double of that of the female (figure 2). In contrast, young female's ano-genital zone seems to be exactly the same as that of young males. From back to the front, we observe the anus, the ano-genital gland and the clitoris at the top of which the urethra emerges. At birth, grass-cutter's testicle is located in the abdominal cavity and the surface of the scrotum is pink and without hair. Testicles migration in the scrotum takes place between 3 and 4 months old and corresponds to puberty. Grass-cuter manifests puberty by simulating copulation activities and triggering fight resulting in serious wounds. Castration, however, limits fighting and allows feedlot rearing. The inguinal position of testicles allows a surgical castration. The width of the inguinal channel obliges the surgeon to set up two surging points to avoid a inguinal hernia.

Methodology

Castration can be performed with or without anesthesia. Castration with anesthesia starts with the anesthesia of the animal which is done with a mixture of Xylazine (2%) and of Ketamine (1%) at the dose of 0.1 ml per kg of live body weight. The castration without anesthesia is performed by handling firmly the animal. Under certain conditions, it is possible to remove easily the two testicles by opening only one inguinal canal. Different steps of the castration operation are:

1- Sterilize the surgical instruments and disinfect the operator's hands.

2- Anaesthetize or handle the animal laid down on its back with posterior legs stretched.

3- Disinfect all the scrotum region (operating field).

4- Pull down the two testicles from the abdomen into the scrotum.

5- Seize the testicle between two fingers (thumb and index), then open the scrotum using a blade of lancet or razor.

6- Stop eventual bleeding with grips once the testicle is out, then rupture the testicular cord by twisting it. Repeat the same operation for the second testicle.

7- Disinfect the wound with iodized alcohol, then apply the yellow betadine, the Ektogan powder and other healing agent (anti-infectious).

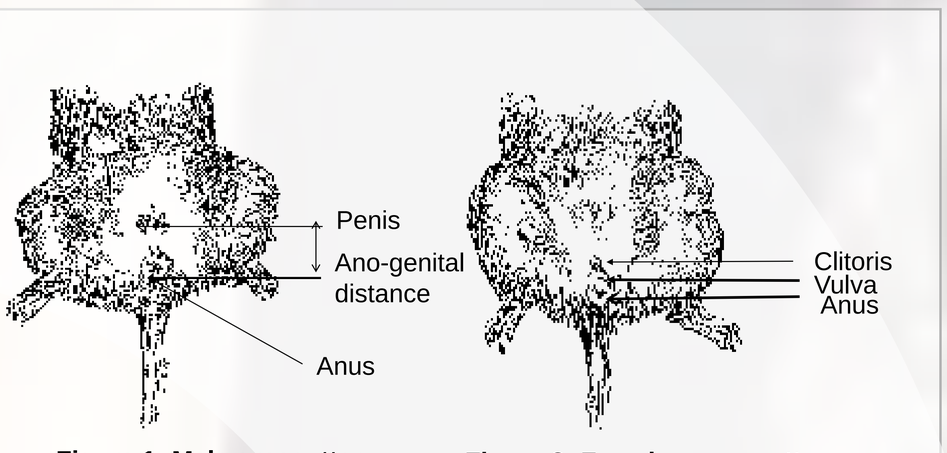

Figure 1 :Male grascutter **Figure 2 :Female grass-cutter**

Beveled razor blade

Handling of the grass-cutter

Disinfecting the ano-genital area by iodized alcohol

Testicles migration from the abdomen into the scrotum

Holding the testicle between the thumb and the index finger

Incision of the scrotum

Extraction of the testicle

Cutting the testicular cord

Dressing of the wound with bétadine

Castred grass-cutter

Results

Application

The success of castration without anesthesia depends much more on the immobilization. This immobilization requires in addition to the operator, two persons. Assistants should have in mind not to pull hard on the posterior legs, otherwise it will increase the cut performed for the operation.

Implication

Contrary to the castration with anesthesia which costs 215 F CFA (0,33 €) per animal, the castration without the anesthesia appears more beneficial because grass-cutter breeders use it without having recourse to veterinary surgeons and better, the cost per grass-cutter head is 140 F CFA (0,21 €) .

Performance

When the castration is performed in good conditions (small cut in the skin), the cicatrisation can occur on average in 10 days. In case of large cut in the skin, tie one or two knots in order to avoid hernia that could be fatal for the animal. The optimal age to castrate grass-cutter in males is 6 weeks. By castrating the subadult bred males between 4 and 8 weeks old, it appears that the live body weight of castrated animals is always higher than that of entire subadult bred males of same age. While comparing between each group of initial age (4, 5, 6, 7 and 8 weeks) and each physiological status (castrated an not castrated) various average values of the live body weights, daily weight gain and feed consumption ratio, it appears clearly that the castrated males at 6 weeks old had better ($P<0.05$) average values (highest live body weight and daily live weight gain, lowest feed consumption ratio).

Conclusion

The castration without anesthesia proves to be the most advised technique, the cheapest and can it is within the grass-cutter breeders reach.

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