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# Successful Surgical Management of Scrotal Necrosis in two Jamunapari Bucks

**G.U. Yadav*, D.U. Lokhande, P.S. Dakhane and A.T. Yamgar**

*Department of Veterinary Surgery & Radiology, Bombay Veterinary College, Mumbai-12, India*

**Corresponding author*

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**A B S T R A C T**

Two Jamunapari adult bucks of 2 and 3.5 years of age respectively were presented to Bai Sakrabai Dinshaw Petit Hospital for Animals affiliated to Bombay Veterinary College, Parel, Mumbai with the history of necrosis of scrotal skin, chronic orchitis and pus discharge from testicles. On thorough clinical examination, it was revealed that in one buck scrotal sac was soft with partial necrotic changes and in another buck, it was completely necrosed. Complete scrotal ablation was performed under light sedation with diazepam administered at dose rate of 0.25mg/Kg I/M and local infiltration anaesthesia with 2% Lignocaine HCl. Both the animals were recovered uneventfully without any complications in period of 12 post-operative days.

## Introduction

Goats are important domestic farm animals in the world as they are the source of meat, milk, skin and wool (Ajani *et al.* 2015). Castration in buck is one of the routine animal husbandry procedures performed worldwide (Ahmed and Ahmed, 2011) and are performed by various methods (Prunier *et al.*, 2006). In Burdizzo method of castration, application of jaws of baby burdizzo castrator is done over the spermatic cord to crush it, causing irreversible damage to the blood vessels supplying to the testicles, leading to ischemia and its atrophy. This method of castration appeared both effective and safe (Ahmed and Ahmed, 2011).

Faulty castration or inhuman method of castration may lead to complications like orchitis, hydrocele, pyocele (Sagar *et al.*, 2010) inguinal hernia, torsion of spermatic cord and scirrhous cord etc. (Kamalakar *et al.*, 2015).

The present paper deals with two cases of faulty castrations perform by animal owner at his home by application of baby castrator at improper place.

## Case history and clinical observations

### Case no. 1

A Jamunapari buck aged 2 years with severe scrotal swelling, scrotal skin necrosis, big wound on testicle, abduction of hind limbs, scrotal pain, discharge from site and line of demarcation of necrosis on testicles was presented to the animal hospital. Through clinical examination revealed that owner had applied baby castrator on testicle and not on spermatic cord. The castration was performed few days before by the owner and was also treated by local veterinarian prior to its admission. The buck was in severe distress and foul smelling pus discharge was present at site of castration (Fig. 1). As both the testicles were necrosed along with the spermatic cord, it was decided to perform complete scrotal ablation.

### Case no. 2

A Jamunapari buck of 3.5 year age was presented with a history of complete necrosis of scrotal skin with an open wound at its tip, foul smelling, pus discharge from wound on scrotum since few days before. This case was as a result of faulty castration conducted by owner. This case was also treated by local veterinarian (Fig. 2). Clinical examination revealed complete necrosis of scrotal skin with severe pain, chronic orchitis, extensive swelling and abduction of hind limbs. Foul Pus discharge from scrotal wound and line of demarcation of healthy and necrosed tissue was also noted. The buck was in severe distress. As there was a complete necrosis of both the testicles and hence planned for complete scrotal ablation.

## Surgical treatment

In preoperative treatment dressing of site was preferred for 3 days and strepto-penicillin @10 mg/kg, BW, IM and meloxicam @ 0.2 mg/kg BW intramuscular was given.

After aseptic preparation, light sedation with diazepam at dose rate of 0.25mg/Kg, I/M and local anesthesia was achieved using 2% lignocaine hydrochloride by local infiltration in a circular manner around neck and scrotum. A circular skin incision was taken at the neck of the scrotum and after blunt dissection of subcutaneous fascia, spermatic cords were approached and severed. The scrotal skin and contents were separated by following standard technique. Transfixation of spermatic cords was done using silk no.1.and ligatures were applied down to external inguinal ring. Subcutaneous tissue sutured with chromic catgut no. 1 and skin incision was sutured with horizontal mattress suture pattern by using Nylon. Postoperatively, Inj. Streptopenicillin @ 10mg/kg. was administered I.M. for 5 successive post operative days, Inj. Meloxicam @ 0.2 mg/Kg B.wt. for 3 post-operative days and daily dressing was performed for 12 post operative days. Sutures were removed on 12$^{th}$ post operative day. Both the animals showed uneventful recovery (Fig. 3 and 4).

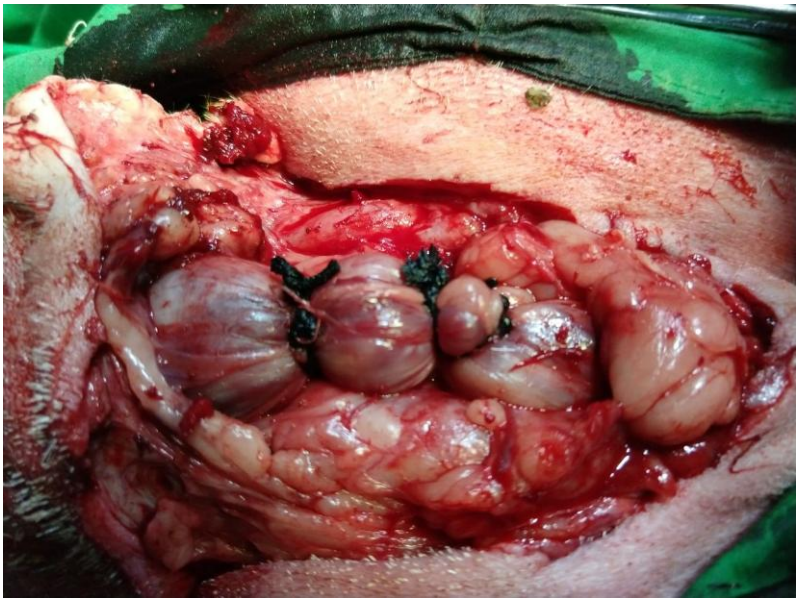
In the present study, the bucks ageing 2 and 3.5 years were presented with history of foul smelling pus discharge, swelling and wound on scrotum. History further revealed that in both the cases the owner himself has performed castration by faulty method and crushed the testicles. Through clinical examination, revealed necrosis of testicle in both cases, abduction of hind limbs, foul smelling pus discharge from wound, swelling of testicle and line of demarcation between healthy and necrosed portion of scrotal skin. According to Kamalakar *et al.,* (2014), orchitis, an inflammation of testis may occur primary or secondary and may be acute or chronic. The history confirmed that faulty castration was performed by applying jaw of baby burdizzo castrator on testicle resulting in orchitis and its necrosis.

**Fig.1** Scrotal necrosis in case no 1

**Fig.2** Scrotal necrosis in case no. 2

**Fig.3** Circular skin incision around neck of scrotum on healthy skin

**Fig.4** Double ligation of spermatic cord



The most widely used methods for castration in buck is rubber ring castration. Other methods of castration in bucks are open or surgical castration and Close or Burdizzo castration. Surgical castration seems to be less acceptable from an animal welfare point of view than burdizzo or rubber ring (Ahmed and Ahmed, 2011). Proper clean dressing and administration of antibiotic for three days resulted in minimized bacterial infection at surgical site. Considering the severity of condition and scrotal necrosis in both the cases complete scrotal ablation was planned. Complete scrotal ablation of testicles was performed under light sedation with diazepam at dose rate of 0.25mg/Kg I/M and local infiltration of 2% lignocaine hydrochloride in scrotum layer wise.. The circular incision was taken on neck of scrotum on healthy skin and spermatic cords were exposed. Total ablation of testicles along with necrosed portion of scrotum is the correct method to treat the cases of scrotal necrosis surgically. Tyagi and Singh (1996) reported the base of scrotum is the proper site for complete ablation of testicles. The dartos and tunica vaginalis was incised and spermatic cords were crushed and ligated with catgut no. 1 by double ligature on both the side. These ligatures were applied down to external inguinal ring. Subcutaneous tissue was sutured with chromic catgut no. 1 and skin was sutured with nylon by interrupted suture. The double ligation of spermatic cord with catgut provides its proper ligation. Streptopenicillin provided antibiotic cover specifically for bacterial infection. Meloxicam subsided inflammation at site. Daily dressing of surgical wound helped to hasten to wound healing.

It is concluded that the two cases of scrotal necrosis in bucks due to faulty castration were presented and were successfully surgically managed by total ablation of scrotum. total ablation is the only method for management of severe complications like scrotal necrosis due to faulty castration

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