PREPUTIAL PROLAPSE AND ITS MANAGEMENT IN SIX GIR BULLS

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Received revised on: 13.2.2018
Accepted on: 19.6.2018

ABSTRACT

The present study is about preputial prolapse and its surgical management in Gir bulls. On presentation all the bulls had pendulous and oedematous preputial sheath with injuries and abrasions. Under xylazine sedation animals were restrained in right lateral position and local analgesia at proposed surgical site was achieved with 2% lignocaine hydrochloride. Following aseptic preparation of surgical site amputation was performed. Circumcision incision was made around base of skin and prepuce junction. Skin and internal mucosa was apposed in simple interrupted manner with non-absorbable suture material. Further post-operative care leads to uneventful recovery in 5 animals, whereas stricture in one animal in which revision of surgery was performed.

***Key words*:** Gir bull, preputial prolapse

Introduction

Prolapse of the prepuce refers to the protrusion and eversion of the inner lining of its sheath having no tendency to return (Arthur *et al*., 1996). Its occurrence is more common in bulls which have tendency to walk with a portion of the prepuce partially prolapsed through the sheath (Frank, 1964). Common structural deformities of sheath and penis found in *Bos indicus* bulls reported were pendulous and loosely attached preputial sheath or penis, protruding prepuce as well as poor attachment to the body in the naval region (Bellenger, 1971). Small abrasions of the prepuce promote oedema and swelling which in turn promote further prolapse of the prepuce and subsequent trauma causing prepuce become dragged on the ground. The bull is unable to retract the prepuce and the erection of penis is not possible due to swelling and usually urination is painful and comes out in thin stream (Sane *et al*., 1994). Chronic prolapse of prepuce has been commonly observed in Gir bulls because of the contamination and repeated traumatic injury (Karle *et al*., 2011). Herein we report preputial prolapse and its surgical management in six Gir bulls.

History and clinical findings

Six Gir bulls aged between 3 and10 years were presented to our college hospital with primary complaint of long pendulous prepuce, dysuria and inability to copulate. Physical examination revealed oedematous, grossly contaminated and ulcerated prepuce (Fig. 1).

Fig. 1**:** Image showing pendulous, oedematous, contaminated and ulcerated prepuce in a Gir bull

Surgery and outcome

Animal was kept off feed for 24 hours and water was withheld for 12 hours before the surgery. An intramuscular injection of amoxicillin-salbactum (4.5 g) and meloxicam (0.5 mg/kg) was given 30 minutes prior to surgery. Sedation was achieved by an intravenous injection of 0.05 mg/kg body weight xylazine hydrochloride. Animal was restrained in right lateral position. Local analgesia was achieved by infiltrating 20 ml of 2% lignocaine hydrochloride at proposed surgical site. Aseptic preparation of the prolapsed prepuce and sheath was carried out with diluted povidone iodine solution. A circumferential incision was made around base of the prepuce at a site immediately distal to the skin-prepuce junction (Fig. 2).

Fig. 2: Intraoperative image showing circumferential incision around base of the prepuce at a site immediately distal to the skin-prepuce junction

Equal amount of the external and internal lining of the prolapse portion was removed. The damaged tissue was excised living an internal and external preputial wound edge to be apposed (Fig. 3). Thereafter internal and external preputial

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Fig. 3: Intraoperative image showing internal and external preputial wound edge to be opposed

wound edge was apposed using non absorbable suture material in simple interrupted fashion. Postoperatively same antimicrobial and analgesic therapy was continued for 5 days and surgical wound was daily dressed with metronidazole and povidone iodine solution to prevent stricture of the preputial opening for a week. One bull had postoperative stricture formation after 1.5 months of surgery and again operated for stricture by putting incision at four side (12, 3, 6, 9 clock wise) of fibrosis. One inch diameter polyvinyl chloride pipe was applied into preputial orifice and fixed with skin suture. Pipe kept for one month and daily dressing was performed. A cotton cloth was tied around abdomen to prevent contamination, flies and oedema. Advice to give sexual rest for 2 month and sutures was removed 12 day of surgery and all bulls were recovered uneventfully.

Discussion

Gir bull is highly predisposed for development of preputial prolapse. It may be due to repeated trauma of prepuce and continuous contamination with urine and dung. Preputial prolapse also developed due to habitual eversion of the preputial epithelium in polled bulls might be due to absence or deficiency of function of the retractor muscle of prepuce opined by Long and Hignett (1970). Postoperative developed inflammatory swelling in this study might be due to soft tissue injury resulted from surgical intervention. Similar findings have been observed by Aubrey, 1970; Larsen and Bellenger, 1971; Karle *et al*., 2011). Surgical method followed in this case leads to uneventful recovery of the animal. Post operative stricture formation following circumcision technique is also reported by Karle *et al*. (2011).

Acknowledgments

Thanks to the Director of Research, Junagadh Agricultural University (JAU), Junagadh Gujarat, and Dean, College of Veterinary Science and Animal Husbandry, JAU for providing facilities require for this study.

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