

SUCCESSFUL POSTHIOPLASTY OF CHRONIC PREPUTIAL PROLAPSE IN A GIR BULL

SANDEEP POTLIYA, R.S. BISLA, SWATI RUHIL, ANKIT KUMAR* and HARPREET SINGH
Haryana Pashu Vigyan Kendra, Karnal-132001, India

Received: 18.06.2020; Accepted: 18.07.2020

SUMMARY

Posthioplasty is surgical technique for reconstruction of prepuce. Prepuce in breeding bulls is regularly predisposed to trauma and infection during natural breeding, resulting in preputial prolapse and phimosis. The present case describes successful surgical management of preputial prolapse in an adult Gir bull by posthioplasty, preserving normal preputial tissue and resuming normal breeding activity of bull without recurrence.

Keywords: Gir bull, Posthioplasty, Prepuce

Preputial prolapse is a chronic condition consisting of protrusion of prepuce either due to trauma, infection or morphogenetic features in some breeds. Condition is common in polled cattle breeds due to the absence of retractor penis muscles (Tyagi and Singh, 1993). Cases of acute prolapse can be effectively treated by conservative methods, while cases of preputial prolapse with chronic fibrosis need radical surgery.

An adult Gir breeding bull of 5-year age was presented to Haryana Pashu Vigyan Kendra, Karnal with history of long hanging and gradually increasing preputial tissue since 8 weeks (Fig. 1). The bull was urinating normally as well as having normal appetite and defecation, but was unable to retract back prepuce into normal anatomical position. Proper physical examination of prepuce revealed prolapse of prepuce without any damage to penis but with moderate signs of oedema and fibrosis (Fig. 2). Although penis was normal but bull was unable to breed.

Posthioplasty of prolapse was planned for resection and reconstruction of prepuce. After fasting of 24 hours, bull was restrained in lateral recumbency under xylazine sedation. The surgical site was prepared along with thorough washing of prepuce with an antiseptic solution (povidone-iodine 1%). After local infiltration of 2% lignocaine, a longitudinal incision was given on prolapsed portion in a manner to retain normal prepuce and simultaneously blood vessels were ligated. Then fibrosed tissue was removed by circular incision leaving elastic tissue layer. After complete excision of prolapse tissue, double layer suturing was done. Firstly, elastic layer was sutured and then internal mucosal layer was sutured with external skin by using polygalactin 910 absorbable sutures (Fig. 3). A five days' course of antibiotics (Ceftriaxone + Sulbactam 4.5gm) and NSAIDS (Meloxicam 5%)

intramuscular injections along with antiseptic (povidone-iodine 1%) douching of prepuce for two weeks resulted in complete healing. After a sexual rest of eight weeks, bull was allowed to mate and no recurrence was seen (Fig. 4).

Prolapse of prepuce is common in breeding bull or bulls having longer preputial sheath (Lagos and Fitzhugh, 1970). Any trauma to prepuce may result in swelling and oedema predisposing to fibrosis and tissue growth. Traumatic injury accompanied by contamination of prepuce was found to be main etiological factor for preputial prolapse in Gir bulls (Karle *et al.*, 2011). In this case, traumatic injury by bull's hind limb may be predisposing factor. Various surgical techniques have been employed for management of preputial prolapse. Conservative resection method was found superior to circumcision incision in terms of reduced postoperative stricture formation (Karle *et al.*, 2011). Also posthioplasty was found more successful technique than circumcision (Desrochers *et al.*, 1995). The present case was managed by using posthioplasty surgery in such a way that prolapsed fibrosed mass was removed and remaining part of prepuce was reconstructed to have an early healing leading to restoration of normal mating without any reoccurrence.

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*Corresponding author: drankitkumar813@gmail.com



Fig. 1. Gir bull having chronic prolapsed prepuce



Fig. 3. Prepuce returned to normal contexture after posthioplasty



Fig. 2. Prolapsed prepuce having moderate oedema and fibrous tissue growth



Fig. 4. Recovered bull after 8 weeks