

## SURGICAL MANAGEMENT OF RECTAL PROLAPSE IN A BUFFALO CALF

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**Abstract:** A 6-month-old buffalo calf was presented at TVCC, IIVER, Rohtak with a history of complete rectal prolapsed for the last 3 days with severe straining and restlessness. Clinical examinations revealed complete 15 cm long prolapsed rectal wall, soiling with faeces and patches of congested and severely necrosed mucous membrane. The animal was operated under caudal epidural anesthesia using lignocaine hydrochloride 2%. Amputation of prolapsed part was done due to severe necrosis of segment. Broad spectrum antibiotics and analgesics were administered post-operatively. Animal recovered uneventfully.

**Keywords:** Buffalo calf, Rectal prolapse, Necrosis, Amputation, Epidural.

### Introduction

Most common surgical condition involving the rectum in cattle, buffaloes, camels and ruminants is rectal prolapse (Tyagi and Singh, 2010). Rectum prolapse involves either the rectalmucosa alone or the full thickness rectal wall. Prolapse may be classified as incomplete, in which only the rectal mucosa is everted, or complete, in which all rectal layers are protruded. Furthermore, the rectum prolapse may containan intussusceptions of the rectum, colon or even small intestine Slatter (2003). The prolapse of the rectum can occur in all species of domestic animals viz. pigs, ruminants, horses and carnivores (Anderson and Meisner, 2008). However, amputation of the prolapse is indicated when reposition is impossible (because of severe swelling or adhesions) or when perforating injuries or necrosis of the mucosal layers are present (Kersjes *et al.*, 1985).Rectal prolapse is common in young animals in association with severe diarrhea and tenesmus. Any delay in treatments may lead to edema, ischaemia, laceration, haemorrhages and shock, resulting in prognosis as poor to hopeless (Pande and Pande, 2002).

### Material and Methods

A 6-month-old buffalo calf was presented with a history of complete rectal prolapse (Fig. 1)

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for the last 3 days with soiling with faeces and patches of congested and severe lyncrossed mucous membrane. The animal was restrained in lateral recumbency and given epidural anaesthesia using lignocaine hydrochloride 2% in sacro-coccygeal space. The prolapsed mass was washed with antiseptic solution (potassium permanganate solution [1:1000]) properly. Fingers were placed within the lumen of rectum and a series of four mattress sutures were placed through the mucosa and submucosa that is two thicknesses of the prolapsed rectal wall close to the mucocutaneous junction using catgut no. 2. After this, the outer barrel followed by inner one was completely incised close to the suture line (Fig. 2). Then a second row of continuous sutures was placed through both the barrels (mucosa and submucosa) using catgut no. 2. The stump was returned through the anal sphincter (Fig. 3). Post surgically regular cleaning, dressing with antiseptic ointment as topical anodyne was done for 10 days. The site was applied with flyrepellent preparations and kept under a cloth cover. Broad spectrum antibiotic (Monocef @ 1 gm i.v.) for 5 days, NSAID (Melonex @ 7ml i.m.) for 3 days were administered.

### **Result and Discussion**

Animal recovered uneventfully as there was absence of anal stricture after 10 days. The patient was kept on easily digestible green fodder. Careful digital removal of faeces from rectum was also tried. Rectal prolapse have been reported to commonly occur in young animals in association with diarrhea (Rubin, 2013). A genetically inherited trait is another factor that predisposes calves to develop rectal prolapse (David and Matt, 2008).Rectal prolapse may result from prolonged tenesmus or increased intra-abdominal pressure due to bloat, proctitis, diarrhoea, act of parturition and constipation (Tyagi and Singh, 2010). There was history of chronic diarrhea in present case. Lignocaine hydrochloride 2% epidural was used by Singh and Jain (2013) however similar anesthesia was used in present study. The usual procedure for correction of rectal prolapse is its reposition and application of a purse string suture (Jean and Anderson, 2006). Similar method of repositioning and purse string suturing was also used by Madhu *et al.* (2014).Amputation of the prolapse is indicated when reposition is impossible (because of severe swelling or adhesions) or when perforating injuries or necrosis of the mucosal layers are present (Kersjes *et al.*, 1985). Several techniques of prolapsed rectum amputation have been described and accepted like submucosalre section (Johnson, 1943), rectal ring method, stair stepamputation (Fubini and Duchrame, 2004 and Weaver *et al.*,2005), delorme's operation (Delorme, 1900) and popular transabdominal procedures namely Ivalon® sponge (Morgan *et al.*,1972), Marlex® mesh

(Keighley *et al.*, 1983), Ripstein (Ripstein, 1972), perineal surgical repair (Nay and Blair, 1972), prophylactic colcopexy (Sherding, 1996) and extended abdominal rectopexy (Mann and Hoffman, 1988). Submucosal resection (Johnson, 1943) is the preferred technique if the prolapsed mucosa is necrotic, ulcerated, or traumatized. Severe necrosis of mucosal layers was found in present study so amputation was performed by submucosal resection technique in present case. In this paper successful management of rectal prolapse in a buffalo calf is presented.

## References

- [1] Anderson, D.E. and Miesner, M.D. (2008). Rectalprolapse. Veterinary Clinics of Food Animals, 24: 403-408.
- [2] David, E.A. and Matt, D.M. (2008). Rectal prolapse. Veterinary Clinic of North America: Food Animal Practice, 24(2), 2008, 403 – 408.
- [3] Delorme, R. (1900). Sur le traitement des prolapsus durectum totaux par l'excision de la muqueserectale aurectal-colique. Bulletin Et Memoires De La Societe Des Chirurgiens De Paris, 26: 498-499.
- [4] Fubini, S. and Duchrame, N. (2004). Farm Animal Surgery, 1st edn., Elsevier, USA. pp. 258 – 262.
- [5] Jean, G.S. and D.E. Anderson(2006). Anesthesia and surgical procedures in swine, p. 1107-1109. *In* Straw, B.E., J.J. Zimmerman, S.D. Allaire and D.J. Taylor. (eds.) Diseases of Swine, 9th ed. Blackwell Publishing, Oxford, UK.
- [6] Johnson, H. (1943). Submucous resection, surgical resection prolapse of the rectum. Journal of the American Veterinary Medical Association, 102: 113-115.
- [7] Keighley, M.R.; Fielding, J.W. and Alexander-Williams, J. (1983). Results of Marlex mesh abdominal rectopexy forrectal prolapse in 100 consecutive patients. British Journal of Surgery, 70(4): 229-232.
- [8] Kersjes, A. W. *et al.* (1985). Atlas of Large Animal Surgery, pp. 48-49, Williams & Wilkins Baltimore, London.
- [9] Madhu, D.N.; Monsang, S.W.; Singh, J. (2014). Management of Rectal Prolapse in a Postpartum Buffalo. Intas Polivet 15(2):483-84.
- [10] Mann, C.V. and Hoffman, C. (1988). Complete rectal prolapsed: the anatomical and functional results of treatmentby an extended abdominal rectopexy. British Journal of Surgery, 75(1): 34–37.

- [11] Morgan, C.N.; Porter, N.H. and Klugman, D.J. (1972). Ivalon(polyvinyl alcohol) sponge in the repair of completerectal prolapse. *British Journal of Surgery*, 59(11):841-846.
- [12] Nay, H.R. and Blair, C.R. (1972). Perineal surgical repair ofrectal prolapse. *American Journal of Surgery*, 123:577-579.
- [13] Pande, G. and Pande, V. (2002). Indian Veterinary Medicine Journal. Vol. 26, p. 378.
- [14] Ripstein, C.B. (1972). Procidentia, definitive corrective surgery. Diseases of the Colon and Rectum, 15(5):334-336.
- [15] S.I. Rubin, Rectal prolapse: Diseases of the rectum and anus In Merck Veterinary Manual (USA, Merck Sharp & Dohme Corp., Merck & Co, 2013).
- [16] Sherding, R.G. (1996). Diseases of colon, rectum and anus.In Todd. R. Tams: Handbook of Small AnimalGastroenterology. W.B. Saunders, Philadelphia. pp. 362-363.
- [17] Singh, P and Jain, R (2013).Surgical correction of rectal prolapse in buffalo. International Journal of Agricultural Sciences and Veterinary Medicine. 1(4):101-2.
- [18] Slatter, D. (2003).Textbook of Small Animal Surgery, 2nd Edition, p. 686, Saunders, Philadelphia.
- [19] Tyagi, R.P.S and J. Singh. (2010). Ruminant Surgery, pp. 221-223. In The Digestive System Indian.CBS Publishers and Distributors, India.
- [20] Weaver, D.; Steiner, A. and Jean, G. (2005). Bovine Surgery and Lameness, 2nd ed, Blackwell publishing, pp. 135- 137.

**Legend of Figures-**

**Fig. 1:** complete rectal prolapse

**Fig. 2:**Incision given

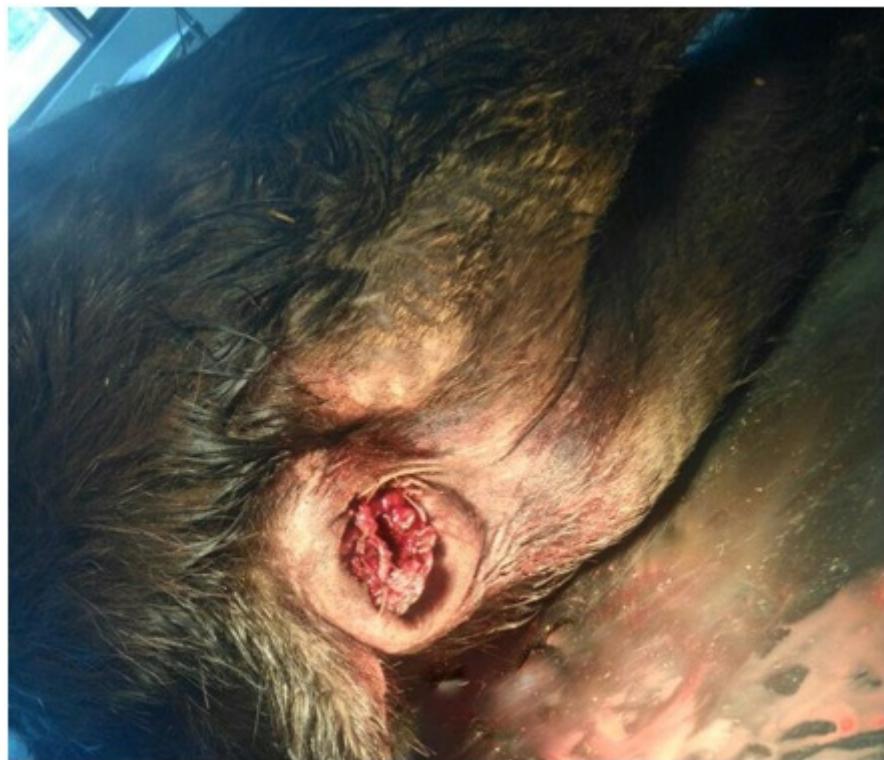
**Fig. 3:**After Surgery



**Fig. 1**



**Fig. 2**



**Fig. 3**