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Successful surgical management of traumatic laceration of left ischiorectal fossa in a buffalo: A case report

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Abstract

Buffaloes are large, strong animals and unpredictable in their behaviour, and their nomadic nature, coupled with inadequate supervision and free-ranging management practices observed under Indian conditions, increases their risk of road traffic accidents. A 3 year old non-descriptive buffalo was presented to Large animal unit of Veterinary Clinical Complex, Arawali Veterinary College, Bajor, Sikar with history of extensive lacerated wound on left ischiorectal fossa that occurred due to automobile accident. On clinical examination, a tear of the posterior aspect of the left coccygeus muscle with an associated partial tear of the levator ani muscle along with some superficial skin lacerations on dorsal lateral aspect of abdomen, base of the tail was observed. The damaged muscular structures were identified, appropriately apposed, and sutured in layers and repaired to restore the perineal anatomical architecture. Animal was treated with parental antibiotics, anti-inflammatory drugs and fluid therapy for five consecutive days along with application of povidone iodine, tinidazole and sucralfate ointment on suture line and orally animal was fed on tender green fodder, owner was advised to restrict the animal's activity and provide adequate postoperative rest. Animal had uneventful recovery.

Keywords: Buffalo, lacerated wound, ischiorectal fossa

Introduction

Several management factors such as animal husbandry, housing design, and characteristics of individual cows along with automobile accidents may lead to traumatic injuries in dairy cows (Busato *et al.*, 2001) [1]. A wound is defined as discontinuity or separation of skin, mucous membrane, or any tissue surface. Lacerations usually occur as a result of wire cuts, kicks, horn injuries, dog bites, automobile accidents etc (Tyagi & Singh, 1993) [7]. A lacerated wound presents torn and irregular edges (Venugopalan, 2009) [9]. Extent of damage can be determined by manipulation of wound edges revealing the degree of involvement of underlying tissues and visceral organs. Further, which plays an important role to choose the best methods for its correction (Kumar *et al.*, 2021) [5]. Vennela *et al.* (2025) [8] stated that surgical repair or reconstruction to restore the anatomical architecture and protrusion of perineal lacerations will lead to death of the animals due to hypovolemic shock and in animals with minimal injury on recto-vestibular will lead to metritis and rectovaginal fistula (Kumar *et al.*, 2013) [4]. The present case discusses successful surgical management of lacerated wound of left ischiorectal fossa due to automobile accident in a buffalo.

Materials and Methods

A Non-descriptive weighed 350 Kg buffalo was presented to Large Animal Unit, Veterinary Clinical Complex, Arawali Veterinary College, Bajor, Sikar, Rajasthan with history of extensive lacerated wound on left ischiorectal fossa that occurred due to automobile accident. Physical examination of buffalo revealed dullness with sternal recumbency, on clinical examination animal underwent hypothermia, with blanched conjunctival mucus membrane

revealing more blood loss. Further, detailed examination revealed the presence of tear of posterior aspect of the left coccygeus muscle with an associated partial tear of the levator ani muscle (Figure 1) along with some superficial skin lacerations on dorsal lateral aspect of abdomen, base of the tail was observed with approximately size of 3-4 inches. On gynaeco-clinical examination revealed no involvement of rectum and vagina. Based on the history, clinical examination the case was diagnosed as traumatic laceration associated with recto vaginal fistula.

The perineal region was washed with 1% potassium permanganate solution and the animal was positioned in left lateral recumbency. The wound was first cleaned by flushing with normal saline, followed by washing with povidone iodine (5%). Epidural anaesthesia using 7 ml of 2% lignocaine HCL in Sacro-coccygeal space was given. The animal was positioned in right lateral recumbency. Further, glass fragments were carefully removed manually, ensuring complete removal and confirming that no residual pieces remained at the wound site. The tear in the lacerated skin was scarified with a BP blade and followed by debridement. Two temporary retention sutures were placed on ventral and dorsal aspects of tears (Figure 2) on the skin by using chromic catgut (1 size; 5 metric) as per (Vennela *et al.*, 2025) [8]; the lacerated wound were reconstructed in three layers, first layer involving the muscles i.e. levator ani and coccygeal were opposed by simple continuous suture followed by suturing of subcutaneous tissue with chromic catgut size 1, (Figure 3) finally skin edges were apposed using silk (1 size) with an cross-mattress suture pattern. After surgical reconstruction the patency of rectum was checked. The repaired perineal area was dressed with povidone iodine, tinidazole and sucralfate ointment, bandaging was done (Figure 4) and advised to maintained on green grass and to restrict the animal's activity. Post operatively animal was treated with fluid therapy (Ringer's lactate solution, 5% dextrose) intra venously (I/V), systemic antibiotic therapy (Inj Enrofloxacin @ 7.5 mg per kg) intra muscularly (I/M) and NSAID (Inj Flunixin meglumide @ 1.1 mg per kg) intra muscularly (I/M) for 5 consecutive days. After adequate postoperative rest. Animal showed an uneventful recovery.

Results and Discussion

This case suggested that placement of stay sutures at both ends of the lacerated wound is essential for proper alignment, exposure and accurate apposition of the wound margins (Vennela *et al.*, 2025) [8]. Lacerations involving the ischiorectal fossa are particularly challenging to reconstruct because of their deep anatomical location of muscles mainly the levator ani and coccygeus muscles (Habel, 1966) [3]. The use of temporary stay sutures facilitated controlled manipulation of the wound edges and maintaining their alignment during layered reconstruction further, used for bandaging.

In Indian conditions, buffaloes are strong animals and inconstant in their nomadic nature, and along with inadequate supervision and free-ranging management practices increases their risk of road traffic accidents. Kumar *et al.* (2021) [5] stated wounds has impact vary from contusions, lacerations, and penetrating wounds involving internal organs to fractures. Kumar *et al.* (2021) [5] concluded successful wound management is always based upon the regular follow up of the general principals of wound care. The wounds more than 6-8 hours duration are difficult to heal by first intension (Tyagi & Singh, 1993) [7]. However, the wounds in the

present case were less than 6 hours old and managed with Tenants of Halstead (Venugopalan, 2000) [9] that resulted in first intension healing of lacerated wound. It can be concluded that surgical reconstructive surgery helped to restore the anatomical architecture without much complications agreed with Singh and Saharan (2017) [6].

No post-surgical complications like suture abscesses, seromas, hematomas, and dehiscence (Fubini and Ducharme, 2004) [2] did occur which aided the animal to make an uneventful recovery.



Fig 1: Tear of posterior aspect of the left coccygeus muscle and partial tear of the levator ani muscle



Fig 2: Retention sutures were placed on ventral and dorsal aspects of tears



Fig 3: Simple continuous suture of muscles followed by suturing of subcutaneous tissue



Fig 4: Dressed with povidone iodine, tinidazole and sucralfate ointment and bandaging was done

Conclusion

This case report concludes that perineal lacerations along with muscles can occur mostly during road traffic accidents and traumatic injuries sustained during inter-animal fighting. Surgical repair or reconstruction to restore the anatomical architecture between muscles and skin was considered to be the gold standard treatment.

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Conflict of Interest

Not available

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Not available

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