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# Surgical management of bowel protrusion through prolapsed uterus in Mehsana buffalo: A rare case

**PM Chauhan, KF Chaudhary, AS Prajapati, RD Prajapati and PH Chaudhary**

**Abstract**
Post-partum uterine prolapse is a common emergency obstetrical problem in ruminants but sometimes leads to severe complications. A seven-year-old Mehsana buffalo in her third lactation was presented with a history of post-partum uterine prolapse that occurred after 4 hrs of normal parturition. The buffalo showed severe abdominal straining and passed feces through the vulva for eight days. The prolapsed mass contains the strangulated part of the intestine through a tear at the tip of the uterine horn. The case was successfully managed by end-to-end anastomosis, followed by proper replacement, and repositioning of genitalia with retention. The buffaloes had passed watery to semisolid feces within 36 hours of operation. The buffalo showed an uneventful recovery without any observable complications.

**Keywords:** End-to-end anastomosis, intestine, uterine prolapse, buffalo

## Introduction
The prolapse of genitalia is one of the major problems causing heavy economic losses to livestock owners through adverse domination on the reproductive performance of the buffaloes (Khan *et al*., 1984; El-Wishy, 2007) [10, 7]. Post-partum uterine prolapse is an emergency obstetrical complication occurring immediately after parturition or occasionally up to several hours afterward. In rare cases, it may occur 48 to 72 hours after parturition in cattle and buffaloes (Roberts, 1971; Bhoi and Parekar, 2009) [14, 4]. In ruminants, a complete eversion of the gravid horn was recorded from 0.3 to 0.5% of all calvings (Luktuke and Chaudhary, 1965) [12]. However, a high incidence (42.9%) of genital prolapse in buffaloes was observed among all obstetrical problems (Samad *et al.*, 1987) [15]. Uterine prolapse is a catastrophe that needs immediate proper treatment; otherwise, interference in the blood supply of prolapsed mass may result in edema, cyanosis, and later on may develop into gangrene. Besides this, the prolapsed uterus may contain internal visceral organs, especially the urinary bladder or intestinal loops. So, this condition can be corrected with a favourable prognosis if treatment is commenced early to avoid injury to prolapsed genital organs (Noakes *et al*., 2019) [13]. Sometimes, improper repositioning or injuries to the prolapsed genitalia, especially the vagina or uterus, leads to further complications like protrusion of genitalia and evisceration of intestines through tear (Veeraiah and Srinivas, 2010; Dar *et al*., 2014; Chauhan *et al*., 2015) [16, 6, 5]. The present communication deals with the successful management of a delayed case of post-partum uterine prolapse with intestinal evisceration through a tear at the tip of the uterine horn in Mehsana buffalo by end-to-end anastomosis followed by proper reposition and retention.

## Case history and observations
A 7-year-old Mehsana buffalo in a third parity was presented at Veterinary Clinical Complex, Deesa, with a history of prolapse of genitalia, which occurs within 4 hours of normal delivery of viable calf before 12 days. The mass was repositioned and retained by applying a rope truss by local veterinarians. The buffalo showed frequent abdominal straining and concurrently passing the feces through the vulvar orifice instead of the rectum for eight days. Clinical observation revealed a slightly congested eye mucus membrane, and rectal temperature was marginally elevated at 102.3°F. The buffalo exhibited severe abdominal straining and discomfort. A huge prolapsed mass was hung up to the hock joint. The mass was severely oedemated, inflamed, cyanotic, and contaminated with dirt, soil, feces, and blood clots. The prolapsed mass contains two parts: 1) Upper part- Left uterine horn smeared with a grey-

colored fecal material with shrunken caruncles and 2) Lower part-strangulated foot-ball-size necrosed portion of bowel (intestine) drooped from the tear at the tip of left everted uterine horn (Fig.1a & b). Watery feces were oozing out from the later part of the mass. On per vaginal examination, the cervix was constricted, opened up to one hand, and firm in consistency. The rectum was empty and contained mucus-coated feces with non-dilated intestinal loops; based on per-rectal examination. Haemogram perceived leucocytosis along with neutrophilia. Based on the above facts, the case was diagnosed as a protrusion of the bowel through the prolapsed uterus.

**Fig 1a:** Prolapsed mass contains left uterine horn and intestinal loops as a necrosed part

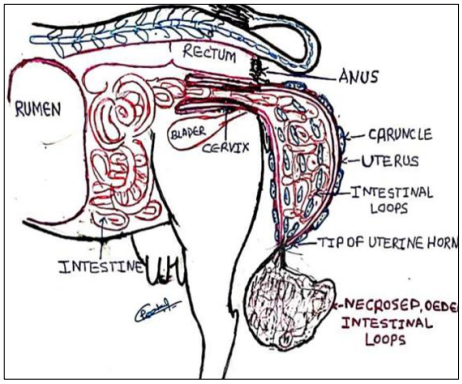


**Fig 1b:** Diagrammatic representation of present case of uterine prolapse

**Surgical-obstetrical management**

The buffalo was restrained in left lateral recumbency and a 4 ml of Inj. Bupivacaine was infused into sacro-coccygeal space to achieve caudal epidural anesthesia. The mass was cleaned with mild potassium permanganate (1:1000), followed by a normal saline solution. The case was managed by two ways as below;

1) **Surgical management by end-to-end anastomosis:** First, identified the healthy part of the intestines and pull it out from the torn portion of the uterus. Artery forceps were clamped on the intestine at both ends. Thereafter, dissected the necrosed part of the strangulated bowel and mesentery with the help of scissors (Fig. 2). The intestinal edges were flushed with a normal saline solution. The end-to-end anastomosis of intestinal edges was performed by the Schmieden pattern using Vicryl # 3-0 suture (Fig. 3). The mesentery was sutured by continuous pattern. Powder Lixen and Liquid paraffin was applied on sutured line and pushed back into the tear portion of the uterus.

**Fig 2:** Dissected part of bowel

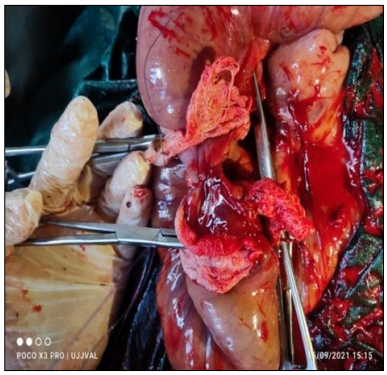

**Fig 3:** End-to-end anastomosis by Schmieden suture pattern

2) **Obstetrical management of uterine prolapse:** After end-to end anastomosis, the edges of the torn uterus were flushed with mild antiseptic and normal saline solution. The lubricated prolapsed mass was replaced with help of palm and finger tips (Fig 4). The proper reposition of uterus was achieved by fist applying through constricted cervix (Fig, 5). The rope truss was tied to prevent the reoccurrence due to tenesmus for retention (Fig. 6).

**Fig 4:** Replaced prolapsed mass with help of palm and figure tips

**Fig 5:** Applied fist for proper repositioning of the uterus

**Fig 6:** Applied rope truss for retention of mass

The buffalo was treated with inj. NS @ 4 liters, inj. DNS @ 2 litres, inj. RL @ 2 litres Inj. Oxytetracycline @ 80 ml I/V, Inj. Flunixin meglumine @ 20 ml I/V, Inj. Calcium borogluconate @ 300 ml I/V, Inj. Dexamethasone @ 20 ml I/V, Inj. Tribivet 15 ml, I/V and Bol. Oriprim U @ 4 intra-uterine. The antibiotic, analgesic, fluid and supportive therapy were continued for five consecutive days. Owner was advised to at most care of feeding and watering. Buffalo had passed watery faeces after 18 hrs and normal semi-solid faeces after 36 hrs of operation and retention of genitalia (Fig. 7).

**Fig 7:** Watery feces passed after 18 hrs of intestinal end-to-end anastomosis

## Discussions

Post-partum uterine prolapse is a commonly encountered emergency obstetrical complication that occurs in 3rd stage of labor in cattle and buffaloes. It is predisposed or results due to several factors, including violent tenesmus, loss of myometrial contraction, poor uterine tone, attached fetal membrane, excessive traction on fetus, increased intra-abdominal pressure, lack of exercise, hypocalcemia, low plan of nutrition, tympany, excessive estrogen content in the feed and extreme laxity of the perineum and vulvar lips, etc. (Roberts, 1971; Kumbhar *et al.*, 2009; Ahuja *et al.*, 2016; Noakes *et al.*, 2019) [14, 11, 2, 13]. In post-partum uterine prolapse, early intervention is vital to ensure the animal's better prognosis and survivability (Abdullah *et al.*, 2016) [1]. Once delayed intervention usually results in a poor prognosis of a case due to a high risk of severe hemorrhage, trauma, septicemia, necrosis, gangrene, shock, and ultimately death of the animal (Andrews *et al.*, 2004) [3]. In this case, the animal was presented with prolapsed genitalia and protrusion of strangulated and necrosed bowel even after 12 days, possibly due to improper repositioning and incorrect handling. Clinical management of recurrent post-partum uterine prolapse has been reported earlier in buffaloes (Kapadiya *et al.*, 2015) [9]. Like the present study, Dar *et al*. (2014) [6] also reported a 3rd-degree uterine prolapse with prolapsed intestines through a uterine tear in Jersey crossbred cow. In the present case, the haemogram showed evidence of leucocytosis with neutrophilia, as Abdullah *et al*. (2016) [1] reported earlier.

The uterine or vaginal tear is expected in late gestation or during labor (Noakes *et al.*, 2019) [13]. Various researchers have also reported the protrusion of genitalia through a vaginal tear (Veeraiah and Srinivas, 2010; Chauhan *et al.*, 2015) [16, 5]. The uterine tear can occur due to accidental traumatic injuries and the presence of some weak points (Jackson, 1995) [8] and extrusion of intestines due to strong abdominal contractions on a weak traumatized wall which might have been torn by bony prominences of the fetus or dam (Roberts, 1971) [14]. In this case, the fundamental cause was evaluated to be the improper repositioning of genitalia with faulty handling by local veterinarians, which causes uterine tears and later on predisposed to the evisceration of intestines, concurrent to severe abdominal straining through it. Now a day, buhner's or purse ring suture is commonly applied as a stay suture on the vulva either alone or in combination with a rope truss to prevent the reoccurrence (Bhoi and Parekar, 2009; Dar *et al.*, 2014; Kapadiya *et al.*, 2015; Ahuja *et al.*, 2016) [4, 6, 9, 2], but in the present case, only applied the rope truss which is beneficial to owner and animals also. The future fertility of buffalo was questionable in the present case might be due to the loss of the left uterine horn tip, but it had a chance to conceive based on the right part. Further, based on the literature review, not a single case of uterine prolapse in buffalo was complicated intestine protrusion through uterine tears corrected by surgically end-to-end anastomosis followed by repositioning and retention.

## Conclusion

The current clinical case reports on evisceration/protrusion of the intestine through uterine tear was diagnosed and managed successfully by end-to-end anastomosis and proper obstetrical management (replacement, reposition, and retention) in Mehsana buffalo after 12 days of normal parturition even necrosis of protruded intestinal loops.

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**References**

1. Abdullah FFJ, Abba Y, Sadiq MA, Chung ELT, Hambali IU, Bitrus AA, *et al*. Clinical case of uterine prolapse in a cow, It is an emergency. Veterinary Clinical Science. 2016;4(4):45-46.
2. Ahuja AK, Singla K, Singhal S, Kumar S. Management of post-partum bilateral uterine prolapse in a cross bred cattle: A case report. Haryana Veterinarian. 2016;55(2):239-240.
3. Andrews AH, Blowey RW, Boyd H, Eddy RG (Eds.). Bovine medicine: diseases and husbandry of cattle. John Wiley and Sons; c2004. p. 514-515.
4. Bhoi DB, Parekar SS. Post-Partum Uterine Prolapse in a Non-descript Buffalo. Veterinary World. 1971;2(4):149.
5. Chauhan PM, Nakhashi HC, Rajan BM, Bhavsar JA, Sharma VK. Protrusion of genitalia through vaginal tear in a buffalo. Indian Journal of Animal Reproduction. 2015;36(1):64-67.
6. Dar SH, Naikoo M, Dar KH. Management of Uterine and Intestinal Prolapse in a Postpartum Cow. Intas Polivet. 2014;15(2):430-431.
7. El-Wishy AB. The postpartum buffalo: I. Endocrinological changes and uterine involution. Animal Reproduction Science. 2007;97:201-215.
8. Jackson PGG. Dystocia in the cow: In: Handbook of veterinary obstetrics. W.B. Saunders Co. Ltd., Philadelphia; c1995. p. 30-69.
9. Kapadiya PS, Chauhan PM, Nakhashi HC, Sharma VK, Sutaria TV. Recurrent post-partum uterine prolapse in a primiparous Mehsana buffalo- A case report. Journal of Livestock Science. 2015;6:109-112.
10. Khan MZ, Verma SK Khar SK. Studies on Antepartum prolapse of vagina in buffaloes. Haryana Agricultural University Journal of Research. 1984;14(3):282-285.
11. Kumbhar UB, Suryawanshi AA, Mulani JB, Raghuwanshi DS. Clinical management of post-partum eversion of uterus in Marathwadi buffalo. Veterinary World. 2009;2(5):202.
12. Luktuke SN, Choudhury G. Studies on the incidence of physiological and pathological termination of pregnancies in Hariana females. Indian Veterinary Journal. 1965;42:930-936.
13. Noakes DE, Parkinson TJ, England GCW. Veterinary Reproduction and Obstetrics. 10th Edn., Elsevier, W B Saunders Company, Philadelphia; c2019. p. 236-249.
14. Roberts SJ. Veterinary obstetrics and genital diseases, 2nd edn. C.B.S. Publisher and distributors, Delhi; c1971. p. 308-313.
15. Samad HA, Ali CS, Rehman NU, Ahmad A, Ahmad N. Clinical incidence of reproductive disorders in buffaloes. Pakistan Veterinary Journal. 1987;7(1):16-19.
16. Veeraiah G, Srinivas M. Spontaneous extrusion of the intestines and uterus as sequelae to vaginal prolapsed in buffalo heifer: A case report. Buffalo Bulletin. 2010;29:60-64.