



ISSN: 2456-2912

VET 2023; 8(5): 20-22

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Received: 02-05-2023

Accepted: 05-06-2023

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## Management of mishandled recurrent total uterine prolapse with type ii perineal laceration in a Gir cow

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### Abstract

A Gir cow with the history of mishandled, delayed case of recurrent total uterine prolapse in lateral recumbency was admitted. On clinical examination contracted cervix with type II perineal laceration was identified and prolapsed mass was repositioned through cervicotomy. After the repositioning the uterus perineal tears were surgically reconstructed with appropriate and attentive care and cessation of the abdominal straining was reported 3 days later. Cow recovered uneventfully after 12 days.

**Keywords:** Gir cow, uterine prolapse, perineal laceration, cervicotomy

### 1. Introduction

Uterine eversion or casting of whether is important life threatening obstetrical disorder that occurs oftenly during third stage of labour after the normal or assisted fetal delivery (Selvaraju *et al.*, 2020) [11]. Its unusual occurrences such as uterine prolapse after the abortion in goat (Palanisamy *et al.*, 2007; Selvaraju *et al.*, 2010 and Palanisamy *et al.*, 2012) [2, 8, 6], eversion of both uterine horns 72 hours after the fetal expulsion in sow (Periyannan *et al.*, 2021) [3] and uterine prolapse with intestinal protrusion through vaginal tare in Kangayam cow and buffalo (Selvaraju *et al.*, 2010 and Selvaraju *et al.*, 2019) [8, 9] also documented in various reports. Improper repositioning and faulty suturing methods predispose the non-productive abdominal straining, invagination of uterine lumen and rupture of vaginal or vulval mucus membrane result in recurrence (Prakash *et al.*, 2016 and Periyannan *et al.*, 2022) [5, 4]. Blood loss, fatal hypovolemic shock, septic metritis, peritonitis and infertility are the common sequela which were had a correlation with delayed and mishandled practices of uterine prolapse (Prakash *et al.*, 2016) [5]. In mare incidences of perineal laceration is quite common due to long fetal extremities and it rarely occurs in primiparous cow during the labour (Selvaraju *et al.*, 2022) [12]. However, this present paper describes the management of type II perineal laceration due to mishandled postpartum uterine prolapse in Gir cow.

### Case history and clinical observation

A pluriparous Gir cow on its third postpartum period was brought to the Obstetrical unit of the Veterinary Clinical Complex, Veterinary College and Research Institute, Namakkal for treating the recurrent uterine prolapse. At the time admission the cow was in lateral recumbency. Uterine eversion followed by the parturition and early attempt by field veterinarian was reported by owner. However, there was reoccurrence due to improper uterine repositioning and incorrect application of vulval retention suture (Fig. 1). On clinical examination, the cow appeared weak and it was in lateral recumbency with tachycardia, tachypnoea, swollen congested prolapsed uterine mass (Fig.1) with constricted cervix, extensive vaginal tear and bleeding from the mass. Further, clinical examination of the uterine mass after the removal of dirt and debris revealed Type II perineal laceration.

### Treatment and Discussion

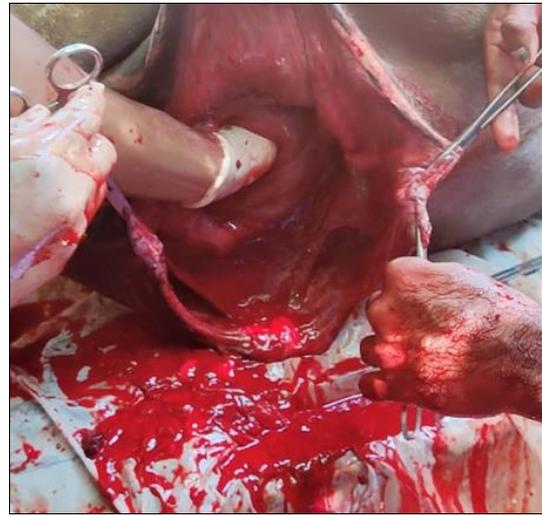
Under epidural anaesthesia (5 ml of 2% lignocaine hydrochloride) prolapsed uterine mass and perineal area were cleaned with 1% potassium permanganate solution.

Then hypertonic saline solution was used to reduce the oedema and necrosed tissue over the prolapsed uterine horns were removed. After the lubrication with antiseptic cetrimide cream an attempt on repositioning the prolapsed uterus was unsuccessful due to a constricted cervix. Hence, it was decided for cervicotomy for the proper repositioning of the uterine mass into its original position. Uterine repositioning followed by the cervicotomy (Fig. 2), the cervical incision on 3 'o' clock and 9 'o' clock position was sutured with absorbable suture material (Fig. 3). Lacerated perineal wounds were cleaned with diluted povidone iodine and normal saline. Vestibular muscles and vulvar constrictor muscles were sutured with chromic catgut No.2 using a simple continuous suture pattern (Fig. 4). Subcutaneous sutures were applied with chromic catgut No.1 and skin was closed by cross mattress suture pattern. Finally, Buhner's buried hidden suture was applied to prevent reoccurrence and postoperatively the cow was treated with ceftriaxone (20 mg/kg, i/v), flunixin meglumine (1.1 mg/kg, i/m), calcium borogluconate (450 ml, i/v) and chlorpheniramine maleate (0.5mg/kg, i/m) administered intramuscularly. This treatment was followed for next three days except calcium therapy, vulval and skin sutures were removed on 10<sup>th</sup> postoperative day. Normal reproductive tract confirmation was reported three weeks after the surgical intervention.

Incidences of uterine prolapse ranges from 0.3% to 0.5% of all calvings (Bhoi *et al.*, 2009) <sup>[1]</sup> and delayed cervical involution due to hypocalcaemia or milk fever, forced extraction and retained fetal membranes predispose the postpartum uterine eversion (Roberts, 2004) <sup>[7]</sup>. Among the postpartum disorders uterine prolapse is the very painful condition which make the affected animal into sternal or lateral recumbency. Any delay in reposition of everted uterine mass causes the irritation, inflammation, infection and death due to shock (Selvaraju *et al.*, 2020) <sup>[11]</sup> and delayed treatment also makes difficulty in uterine repositioning due to cervical contraction, swelling or oedema and hardening of prolapsed uterus. Successful recovery and occurrence fertile reported in 40 to 60% and 73.5% to 80 of affected animals (Tyagi and Singh, 2002) <sup>[13]</sup>. In this present case sever continuous abdominal straining due to improper repositioning and prevention of recurrence management caused the perineal laceration and based on the degree of damage and layer involved this condition was classified as type II perineal laceration and it was successfully managed by appropriate surgical procedure with proper postoperative care.



**Fig 1:** Prolapsed uterine maas with improper vulval suturing



**Fig 2:** Uterine repositioning after the cervicotomy



**Fig 3:** Suturing of cervical incision



**Fig 4:** Recontraction of perineal laceration

## Conclusion

Reoccurrence of uterine prolapse due to mishandling is reported as etiological factor for the type II perineal laceration in present report and further proper repositioning, survivability, prevention of fatal complication associated with delayed management and restoration of fertility with postpartum uterine eversion rely on timely intervention, proper reposition and suitable suturing practices.

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