Short Communication

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# Successful Management of Left Side Pre-cervical Uterine Torsion in a Gir Cow

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## *ABSTRACT*

An 8 years old Gir cow in third parity with a history of completed gestation period and unsuccessful attempts to correct the torsion was presented. Per-rectal examination revealed left-sided, pre-cervical uterine torsion of more than 180°. After the arrival of the case at the Referral Veterinary Polyclinic (RVP), IVRI, Izatnagar, the case was stabilized through fluid therapy and other supportive treatment, and an attempt was made to correct the torsion through Sharma's Modified Schaffer's method but, it remained unsuccessful. So, cesarean section was performed and a dead emphysematous fetus was extracted and after suturing of uterus, detorsion was done within abdominal cavity.

***Key words:*** Left side uterine torsion, Modified Shaffer's method, Gir cow, Laparohysterotomy.

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## INTRODUCTION

Uterine torsion is the rotation of the gravid horn alone or along with the uterine body on its longitudinal axis but, the former is rarely encountered (Rakuljic-Zelov, 2002). This leads to the narrowing of the birth canal causing dystocia (Aubry *et al.,* 2008), and may even result in heavy economic losses to the farmers due to the death of either fetus or dam or both besides impaired lactation (Uttam *et al.,* 2015). The incidence of uterine torsion, as well as the time of occurrence in bovines, emphasizes its impact on the dam's health and thus, dairy herd profitability (Schonfelder and Hasenclever, 2005). Mohteshamuddin *et al.* (2014) described uterine torsion as an obstetrical emergency. Uterine torsion is commonly observed in buffaloes, dairy cows, and occasionally in beef cows (Sheetal *et al.,* 2014). Torsion in uniparous animals is either to the right side (or) to the left side. In the majority of cases, post-cervical uterine torsion occurs in which the gravid uterus rotates about its long axis, with the point of torsion being the cranial vagina just caudal to the cervix. However, less commonly pre-cervical torsion occurs with the point of torsion

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being cranial to the cervix (Roberts, 1986). Occurrence of pre-cervical torsion is rare compared to post-cervical torsion and is always accompanied with incomplete cervical dilatation due to severe ischemia of cervical tissue as compared to post-cervical torsion (Honparkhe *et al.*, 2009; Kumar *et al*. 2019). For the management of uterine torsion cases Sharma' modified Schaffer's method is being used most commonly employed but, failure of detorsion following this method is accompanied by cesarean section (Ghuman, 2010). This clinical case report presents an unusual pre-cervical left-sided uterine torsion and its successful management by left flank cesarean section.

## CASE HISTORY AND OBSERVATIONS

An eight year old pluriparous Gir cow was presented with a history of completed gestation length twelve days back and uterine torsion diagnosed at field level. Multiple futile attempts were made in order to relieve the torsion at the field level. At the time of the presentation at RVP, the cow had reversed all the signs of parturition. Per-vaginal examination of the cow did not reveal much besides a finger-like protrusion of a single cervical ring into the vagina with the external os completely closed and moderately hard in consistency. Upon per-rectal exploration revealed the right broad ligament stretched over the top of the twisted portion of the birth canal while, the left broad ligament sank beneath the uterus which confirmed left-sided pre-cervical uterine torsion of more than 180 degrees. The middle uterine arteries were tightly stretched and had a hard pulse. A walnut-sized superficial tear in the mucosal layer on the floor of the rectal wall was also noticed. Rectal temperature was within normal range, however, the pulse and respiratory rate were on the higher side. The above findings confirmed the case as dystocia due to pre-cervical left-side uterine torsion with no cervical dilatation.

## TREATMENT AND DISCUSSION

A single detorsion attempt was made as per the Sharma's modified Schaffer's method, which yielded no progression. Since, this was a delayed case and to save the life of the animal, it was decided to perform a cesarean section. The surgical site on the left lower flank region-lateral and oblique to milk vein was aseptically prepared for operation. Under field infiltration of 2% lignocaine hydrochloride, a 15 cm-long incision was made. Laparotomy was performed in a routine manner to approach the gravid uterus. Exteriorized gravid uterus appeared dark greenish blue (cyanotic) in color and fragile in consistency (Fig.1).

**Fig. 1.** Picture showing exteriorized cyanotic uterus

A dead emphysematous male fetus was removed along with placental remains from uterus. Gross examination of the dead fetus revealed normal development, with some degree of emphysema, and its spine was twisted anti-clockwise which again confirmed the left-sided uterine torsion (Fig.2).

**Fig. 2.** Picture of dead fetus showing twisted spine

The uterus was evacuated and douched completely with normal saline solution before putting the final sutures on the uterus. After the closure of the uterine incision, all surrounding adhesions of the uterus were removed and detorsion was performed. Then afterward, the laparotomy incision was also closed in a routine manner. Postoperatively cow was medicated with DNS (5 liters, i/v), Inj. Ceftriaxone (@ 10 mg/kg b.wt, I/M, Intacef *, Intas Pharma Pvt. Ltd.), Inj. Meloxicam (@ 0.5 mg/kg b.wt, I/M, Melonex*, Intas Pharma Pvt. Ltd.), Inj. Multivitamins (total dose 10 ml, I/M, Tribivet*, Intas Pharma Pvt. Ltd.). Povidone iodine was smeared on the suture line and fly repellent was sprayed over it. After fifteen days of

operation skin sutures were removed and dressing with povidone-iodine continue till complete healing of the surgical wound. The cow made an uneventful complete recovery within a month.

Usually, uterine torsion ensues before the onset or during the late first stage of parturition (Nanda and Sharma, 1986) and rarely during the early second stage of parturition (Noakes *et al.,* 2001). Among the referred cases of torsion, the pregnancy period is generally complete in 77-100% of cases (Srinivas *et al.,* 2007). The present case was of delayed with pre-cervical, left side uterine torsion of more than 180 degree, with adhesions of uterus with other abdominal structures/viscera. Pre-cervical uterine torsion can be diagnosed by per-rectal examination only and in delayed cases, the rectal examination should be carried out to rule out chances of uterine adhesions with other abdominal structures (Noakes *et al.,* 2009). Pre-cervical torsion of uterus is more harmful to cervix owing to severe ischemia of cervical tissue compared to post-cervical torsion (Honparkhe *et al*., 2009). In this case local attempts to detort the uterus using modified Schaffer's method remained unfruitful owing to uterine adhesions. The animal had showed the signs of colic twelve days ago; therefore to save the life of dam, caesarean section was opted as per Sharma *et al*. (2007). The prognosis of uterine torsion is good during early correction. In cases treated beyond 24-48 hours, chances of fetal survival are negligible (Mohteshamuddin *et al.,* 2014), so delayed uterine torsion (>72 hours) should be directly subjected to caesarean operation in order to avoid undue stress of rolling (Prabhakar *et al.,* 1995). Purohit et al. (2012) reported that no calf was born alive, when the case was presented beyond 36 h after 2$^{nd}$ stage of labour as observed in the present case. Caesarean operation is being universally followed in cases of complicated dystocias (Purohit *et al.,* 2013). But, they should be performed as early as possible otherwise lives of calf as well as dam are questionable. The death of the foetus in the present case may be attributed to the delay in presentation to the clinics leading to foetal hypoxia due to separation of foetal membranes. On supervision of exposed gravid uterus, conditions were similar to the findings of Williams (1943) who observed that animals having severe uterine torsion causes obstruction to the blood supply of the uterus, which results in congestion, oedema, shock ultimately death of foetus and even cyanosis and gangrene of uterine wall. The recovery of the cow after surgery was appreciable which was consistent with the findings of Vandeplasche *et al.* (1963) who found that the recovery rate was more than eighty percent for dams where emphysematous foetuses were delivered by caesarean section.

# CONCLUSIONS

From this case it is concluded that uterine torsion is an emergency condition for bovines. If the animal is relieved from this condition in early phase of suffering, then, we can save the life of calf along with dam. It was concluded that in delayed pre-cervical and left side uterine torsion (>72 hours) cases, the caesarean was more reliable method for survivability of the dam.

# CONFLICT OF INTEREST

The authors declare no conflict of interest.

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