

MANAGEMENT OF AN UNUSUAL CASE OF PRE- CERVICAL UTERINE TORSION IN A CROSSBRED HOLSTEIN FRIESIAN COW

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Abstract: Obstetrical problems adversely affect the reproductive efficiency of bovines. Uterine torsion, the rotation of uterus on its longitudinal axis is observed frequently in dairy cattle and buffaloes confined for long periods mostly during parturition and less commonly during gestation. Both maternal and foetal causes are attributed to the aetiology of uterine torsion. A four year old primiparous full term crossbred Holstein Friesian cow was presented veterinary dispensary Chekkanurani, Madurai (Dt), Tamil Nadu with the history of unproductive straining and inappetence and symptom of colic for past 72 hours. Gross examination of animal showed tightened pelvic ligaments, shrinkage of udder and a stiff, stilted stretched gait. Gynaecological examination per-vaginal and per-rectal exploration revealed the right broad ligament crossing over the top of the twisted portion of the birth canal which confirmed left sided pre-cervical uterine torsion of more than 360 degree with incomplete cervical dilatation. Animal cast on the side of torsion. Rolling was applied as per the method described by modified Schaffer's detorsion method. After fourth roll the torsion was completely corrected with improper cervical dilatation. The left paramedian laprohysterotomy performed and a dead calf was delivered. The animal recovered uneventfully.

Keywords: Management, left paramedian laprohysterotomy, left pre cervical uterine torsion.

Introduction

Uterine torsion is defined as twisting or revolution of uterus involve uterine horn alone or uterine horn along with uterine body on its long axis but former is rarely encountered (Sane *et al.* 1982; Dhaliwal *et al.*,1993; Rakuljic-Zelov, 2002). Which leads to narrowing of the birth canal causing dystocia in bovines (Frazer *et al.*, 1996; Aubry *et al.*, 2008) and may even result in heavy economical losses to the farmers due to death of either fetus or dam or both beside impaired lactation (Ghuman, 2010, Uttam *et al.*,2015). It is described as the rotation of uterine arc on its transverse axis similar to an intestinal volvulus. Uterine torsion is the complication of late first stage (or) early second stage labor, and also observed from 70 days of gestation to term (Roberts, 1986). Excessive foetal weight and movements at the time of

parturition, lack of foetal fluid and violence such as sudden falling (or) rolling may be one of the causes. During later pregnancy 45 degree to 90 degree torsion of the uterus are rather frequently found on rectal examination. These often appear to correct themselves before (or) at parturition. In unusual instances torsion of the uterus may involve a 180 to 360 degree. Torsion in uniparous animals are either to right side (or) to left side. In majority of cases the pregnant uterus rotates about its long axis, with the point of torsion being the anterior vagina just caudal to the cervix. This is post-cervical torsion. Less commonly, the point of torsion is cranial to the cervix known as pre-cervical torsion (Roberts, 1986; Jackson, 1995). Most agree that right side torsion occurs more often than left. Higher incidence of uterine torsion in buffalo with maximum frequency during second and third calving contributing to around 56 to 67% of dystocia (Purohit, *et al.* 2011). 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; Prabhakar *et al.* 1997). In the present study, an unusual case of pre- cervical, left side, more than 360 degree uterine torsion with incomplete cervical dilatation in a primiparous cow and its successful treatment is reported.

Case History and Observation

A four year old primiparous full term Holstein Fresian cross cow was brought to the veterinary dispensary Chekkanurani, Madurai (Dt), Tamil Nadu with the history of dystocia and futile handling by non-veterinarian. Animal had unproductive straining and inappetence and symptom of colic for past 72 hours. Gross examination of animal showed tightened pelvic ligaments, shrinkage of udder and a stiff, stilted stretched gait. Temperature and respiratory rate were normal on clinical examination. Per- vaginal examination reveals patent vagina, with only two finger cervical dilatation. Per-rectal exploration revealed the right broad ligament crossing over the top of the twisted portion of the birth canal which confirmed left sided pre-cervical uterine torsion of more than 360 degree. The middle uterine arteries are tightly stretched and had hard pulse. Above findings confirmed the case as dystocia due to pre-cervical left side uterine torsion with incomplete cervical dilatation.

Treatment and Discussion

The animal was cast on its left side and then detorsion was done as per modified Schaffer's method. Per vaginal and per rectal examination were done after each rolling which confirmed futile detorsion. Hence to save the life of animal cesarean section was decided to perform. The animal was given intravenous fluid, cortisone, antibiotics and was prepared for the

aseptic surgery. The left paramedian laprohysterotomy was performed under posterior epidural anaesthesia and local infiltration anaesthesia using 2% lignocaine hydrochloride solution after restraining the animal in lateral recumbency. A dead female calf was delivered. The detortion of uterus was confirmed by two way check one by introducing the hand through surgical wound of uterus and the by outer uterine surface. The surgical wound was closed in a routine manner. Post operatively the cow was treated with Inj. oxyteracycline @ 10mg/kg b.wt, Inj. Metronidazole @ mg/kg b.wt, Inj. Meloxicam 0.5 mg/kg b.wt, Inj. DNS 1000ml I/V for 5 days. Inj. Tribivet 10 ml I/M, Inj. Vit AD3E 10 ml I/M, on alternate days of two injections, Bol. Serrakind 2 No orally for 3 days and the wound was cleaned and dressed with povidone iodine solution. The skin sutures were removed on 15th post operative day and the animal recovered uneventfully.

Incidence of dystocia in cow is reported to be higher than buffalo with right side and post cervical uterine torsion appears to be the most frequent maternal cause of dystocia. It differs in the present case where in the site and side of uterine torsion was pre- cervical and left side with 360 degree. Since most cases of bovine uterine torsion less than 180 degree and about 90% are discovered at the time of parturition when the cervix is relaxed and dilated, the hand may be passed through the twisted portion of the birth canal and the fetus can be delivered by rotation. 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). 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

In the present case, the caesarian was carried out to save the cow with pre- cervical torsion involving four complete rotation and futile detorsion. Pre- cervical torsion is more detrimental to cervix due to severe ischemia of cervical tissue compared to post- cervical torsion. (Honparkhe *et al.* 2009). Cervical dilation failure is commonly observed, subsequent to correction of uterine torsion and is considered a major obstacle in vaginal fetal delivery (Prabhakar *et al.* 2007) especially in the presence of a dead fetus. Most uterine torsions do not warrant surgical intervention and caesarean section is never performed as the first choice. Delayed uterine torsion (>72 hours) should be directly subjected to caesarean operation in order to avoid undue stress of rolling (Prabhakar *et al.* 1995). Nanda *et al.* 1991 and Singh *et al.* 1978 were also suggested caesarean operation was preferable, in cases of uterine torsion that fail to be corrected by rolling or in long standing cases where fetus is dead and uterine adhesions/ruptures are likely. The outcome of a caesarean when the fetus is dead and

emphysematous can be grave. Caesarean is a method of choice in cases presented with a closed cervix and dead fetus with subsided symptoms of parturition (Singh *et al.* 1978). Among crossbreds Jersey breed was found less prone to uterine torsion than H.F. cows (Frazer *et al.* 1996) and the incidence of uterine torsion was higher in primiparous animals (Ali *et al.* 2011) which was similar in the present case also. It is concluded that pre-cervical and left side with 360 degree delayed uterine torsion (>72 hours) cases, the caesarean was more reliable method for survivability of the dam.

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