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Clinical Article

AN UNUSUAL CASE OF UTERINE TORSION AND ITS MANAGEMENT BY LAPAROHYSTEROTOMY IN A KATHIAWARI MARE

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SUMMARY

The uterine torsion and its correction by right lower oblique laparohysterotomy in a mare was performed with combination of xylazine (1.1 mg/kg) and ketamine (2.2 mg/kg)and foals were delivered. Before closing the abdominal wound, the uterus was detorted manually and confirmed per-vaginally for its normal position. After long-term follow-up, the study reported that the mare survived successfully.

Keywords: Uterine Torsion, Laparohysterotomy, Kathiawari Mare

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Uterine torsion is relatively an uncommon but it is a more serious problem in pregnant mare with high mortality rates reported for both the mare and the foal (Frazer *et al.*, 1997; Blanchard *et al.*, 2010). Uterine torsion should be suspected when mares exhibit signs of colic during advance stage of pregnancy (Martens *et al.*, 2008). Several techniques involving nonsurgical and surgical methods have been suggested to correct uterine torsion in the mares have been described (Barber, 1979; Doyle *et al.*, 2002). The nonsurgical management of uterine torsion having fatal risks for both dam and foetus in late gestation in mare (Jung *et al.*, 2008). In India, equine laparohysterotomy is not popular because of lack of experience, infrastructures and post-operative complications. There is lack of literature on long term outcome of caesarean section in Indian breeds of mare. Therefore, there is a need to conduct clinical trial to document surgical outcomes of mare suffering from uterine torsion. Hence, the present report describes about surgical management and postoperative outcome of uterine torsion through right lower oblique laparohysterotomy in Kathiawari mare.

A full term Kathiawari mare on its third foaling was presented to large animal Obstetrics unit, Department of clinics, Veterinary College and Research Institute, Namakkal with history of covered 11 months back, frequent getting up and down, kicking at belly, excessive rolling (Fig. 1) and pawing ground since one week.

Vaginal examination revealed that twisting of vaginal passage was towards right side about 270° and cervix was not palpable. Rectal examination revealed that left broad ligament was tightly stretched along the top of the abdomen and towards right lower abdomen and the case was diagnosed as right side post cervical uterine torsion.

Based on history and obstetrical examination the case was diagnosed as post cervical right side uterine torsion. The mare was restrained on the sand bed and detorsion was attempted with two unsuccessful rotations by modified Schaffer's method. Hence, C-Section by laparohysterotomy was adopted for the condition. The mare was restrained on the sand bed with the combination of xylazine (1.1 mg/kg) and ketamine (2.2 mg/kg) and anaesthesia maintained with ketamine intravenously. The incision site at right paralumbar fossa was infiltered (line infiltration) with 2 per cent Lignocaine hydrochloride. The skin, subcutaneous muscle and external abdominal oblique muscle were incised and the internal abdominal oblique and transversal is muscles bluntly separated along the direction of their fibres. The left gravid uterine horn containing fetus was identified and the incision was made on the greater curvature of the uterus and a dead male fetus was removed by applying caudal and lateral traction. Detorsion of the uterus was accomplished by lifting the uterus with a cupped hand and rotating it dorsally to the left to avoid the rupture of the uterus (Fig. 2). The uterus, broad ligaments and gastrointestinal tract were examined and no other abnormalities detected. According to Barber (1979) the uterus was flushed with normal saline followed by infusion of Inj. Metronidazole (10 mg/Kg).

Uterine torsion should be suspected in a mare in late pregnancy showing signs of low grade abdominal pain (Doyle *et al.*, 2002). Diagnosis is straight forward because the twist can be palpated per rectal, cranial to the cervix and one or both broad ligaments can be felt following the direction of rotation. While the causes of uterine torsion

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Fig. 1. Colic signs Modified Schaffer's method

Fig. 2. Caesarean Section Postoperative recovery

were not clear, sudden fetal and/or maternal movements are thought to play a significant role in cows (Roberts,1971) and unilateral pregnancy in uniparous animals might lead to uterine instability (Jakkali *et al.*, 2022; Selvaraju *et al.*, 2020).

Uterine torsion for most obstetricians represents a "once-in-a-lifetime" diagnosis. According to Selvaraju *et al.* (2020), the degree of uterine rotation did not affect survival of mare orfoal and however torsion >180° would cause greater tissue injury and devitalisation, more severe clinical signs than torsions=180°. Because missed diagnosis due to its rarity comes with devastating long-term effects. Rolling the dam may be complicated by uterine rupture, especially near term, premature placental separation and death of the fetus (Immegart, 1997). Previous reports also recommended that if mare is in a surgical facility where many abdominal surgeries are performed, the ventral midline approach should be considered instead of the flank approach, because it is more versatile (Martens *et al.*, 2008; Saini *et al.*, 2015). Although a flank approach can be used in the mare under general anaesthesia, it is not recommended because it provides very limited exposure and may cause severe muscle trauma (Khosa *et al.*, 2020). The uterus and broad ligaments of pregnant mares should be evaluated by rectal palpation when the animal presents with colic symptoms, in order to make a definitive diagnosis. Caesarean section in the mare is still considered a serious and dangerous operation when suitable surgical facility is unavailable (Dutt *et al.*, 2020).

Based on this study, it is concluded that uterine torsion in mare occurs in advanced stage of pregnancy with poor foetal survivability. Caesarean section under general anaesthesia followed by local infiltration by right lateral oblique laparohysterotomy was a satisfactory technique to deliver the fetus and subsequently detorsion of the uterus with high survival rate and successful breeding in mares.

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