Case Report

# UTERINE TORSION WITH PREPUBIC TENDON RUPTURE IN A HOLSTEIN FRIESIAN CROSSBRED HEIFER

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## ABSTRACT

*A primiparous Holstein Friesian crossbred cow was brought to VCC, VC&RI Namakkal with ventral swelling. Based on rectal examination and abdominal palpation it was diagnosed as right sided uterine torsion with prepubic tendon rupture. After the fetal delivery by caesarean section and proper postoperative care is given for a period of 10 days, life of the dam was saved.*

**Key words**: Cow, Prepubic tendon rupture, Uterine torsion, Caesarean section.

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## INTRODUCTION

The T-shaped compound prepubic tendon (PT) is specialized structure which contains crossed and uncrossed tendons from various origins viz. pectonious, rectus abdominus, oblique abdominus and gracilis muscles and it supports the abdominal muscles by forming the girdle like arrangement. The rupture of the PT is seen most commonly in mares and rarely in cows (Emmerson, 1944). The possible etiological factors are increased weight of the gravid uterus, accidental trauma, twin pregnancy, dropsical condition of the fetal membranes and fetal monster (Selvaraju *et al.,* 2020). Revolution or twisting of uterus is common in last trimester (Senthilkumar *et al.,* 2021) and it is considered as major obstetrical problem causing the dystocia in bovines (Periyannan *et al.,* 2021). Both the incidences were reported alone by various authors (Selvaraju *et al*., 2010, Prakash *et al.,* 2014, Prakash *et al.,* 2016 and Senthikumar *et al.,* 2021). The present report documents the

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rare occurrence of prepubic tendon rupture along with uterine torsion in a heifer.

## CASE HISTORY AND OBSERVATION

A full-term pregnant Holstein Friesian crossbred heifer weighing 435 kg on its first gestation was presented to the Veterinary Clinical Complex, Veterinary College and Research Institute, Namakkal with the history of ventral abdominal swelling (Fig. 1).

The owner reported that sudden enlargement of abdomen was noticed three days before and continuous abdominal straining was observed since last 24 hours. On clinical examination all the physiological parameters were found to be normal and udder secretion turned to colostrum. The vaginal examination revealed intact cervical seal. On rectal examination crossing of left side broad ligament towards right side was palpated which indicated precervical right side uterine torsion. The abdominal palpation of animal on its dorsal recumbency (Fig. 2) revealed bilateral prepubic tendon rupture. Loss of demarcation between the udder and the abdominal wall on both sides indicates the prepubic tendon rupture (Prakash *et al.,* 2016). Hence, this case was diagnosed as precervical right side uterine torsion with prepubic tendon rupture.

## TREATMENT AND DISCUSSION

Under epidural anaesthesia with 2 % lignocaine the animal was restrained in hindquarter elevator on its right lateral recumbency. The site was prepared aseptically and inverted 'L' block anaesthesia (2 % lignocaine) was administered. By left oblique incision, a live male foetus was delivered (Fig. 3) and uterine incision was closed by double layer of inversion suture. Through the same incision the prepubic tendon rupture was identified and small portion of ruptured tendon was sutured with No. 2 (Fig. 4) non-absorbable suture material. Muscle layers were closed with No.2 chromic catgut and skin incision was closed with cotton thread. Post operatively, the animal was treated with tetanus toxoid 6 ml (i/m), oxytocin 30 IU (i/m), Chlorpheniramine maleate 100 mg (i/m), Meloxicam 250 mg (i/m), Streptopenicillin 5 g (i/m), Ringers' lactate 1 lit (i/v) and Dextrose normal saline 2 lit (iv). Two weeks with proper post operative care reoccurrence was noticed, then advised culling.

Prepubic tendon rupture is also called as prepubic desmorrhexis of pregnancy. It occurs most commonly in draft mares and relatively rare in cow and ewe (Roberts, 1986) due to the subpubic tendon support which is absent in mare (Purohit, 2019). In bovines prepubic tendon rupture was most frequently reported with full term pregnancy (Selvaraju *et al.,* 2020) and it makes difficulty in the normal parturition (Dar *et al.,* 2016). At this stage caesarean section is recommended to save the life of the fetus and the condition could be successfully managed by caesarean section in cows than the mares (Selvaraju *et al*., 2020). Due to possibility for reoccurrence in next pregnancy the affected animal should be culled after the successful postoperative care (Al-Ani and Khamas, 2016). Uterine

**Fig 1. Enlargement of ventral abdomen**

**Fig 2. Palpating the prepubic tendon rupture**

**Fig 3. Fetal delivery by 'C' section**

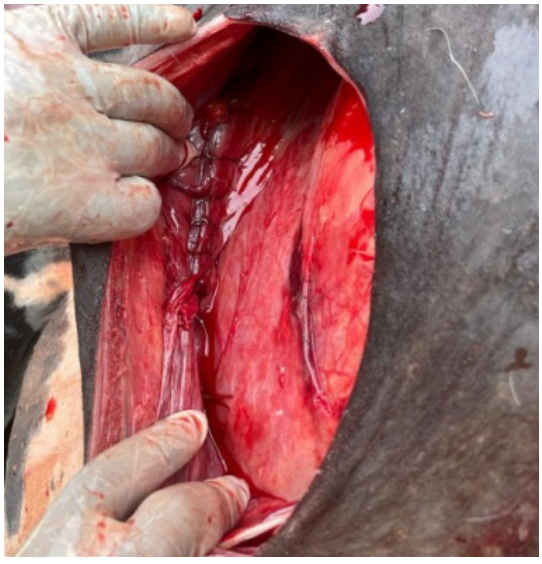

**Fig 4. Sutured prepubic tendon**

torsion might occur due to various etiological factors (Periyannan *et al.,* 2021) but in this present case it was observed along with prepubic tendon rupture. In this present case uterine torsion might be due to prepubic tendon rupture.

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