Fetal retention due to unilateral partial uterine horn torsion in a ewe

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SUMMARY

Uterine torsion has low incidence in small ruminants, which causes the dystocia. This presented report describes, for the first time, partial foetal retention due to the dystocia resulting from unilateral partial uterine horn torsion in a ewe. A pregnant Merinos breed ewe was presented with the history of dystocia. Anamnesis pointed out that a half foetus was removed and cranial parts of the foetus were in uterus. Clinically, abdominal distension and pain were observed. Vaginal examination revealed an opened cervix, and a left sided located fetal part was felt by palpation; however, it was not possible to reach the foetus due to uterine horn torsion. Radiography showed the remained cranial parts of the foetus. Considering the clinical and radiological findings, caesarean section was performed. Abdominal exploration revealed 270 degrees clockwise rotated left uterine horn, which was at cranial ½ part of the uterine horn. After the removing of the foetal parts, all incisions were sutured routinely. Analgesic and antibiotic medications were recommended to the owner. It was informed that ewe was healthy at postoperative ten days.

KEY WORDS

Dystocia, ewe, foetal retention, partial uterine horn torsion.

INTRODUCTION

Uterine torsion is defined as the twisting of the uterus on its long axis that is a remarkable finding for ewe[1,2,3]. In ruminants, this condition is encountered where it involves rotation of this semicircle on its transverse axis, similar to intestinal volvulus[3]. Incidence of dystocia on account of uterine torsion is about 4.4% in ewes[4]. The cause of the low incidence rate of uterine torsion is little practiced involvement in small ruminants, and difficult to distinguish the case for diagnosis and treatment[1]. The main etiological factors responsible for uterine torsion are: suspension with a broad ligament supporting the bending of the uterus and making the gravid uterus more unstable and prone to torsion in ruminants[3]. Uterine torsion causing dystocia can be either partial or total, and usually seen on most caudal portion of uterus as partial. Its assessment is made on the basis of degrees of torsion. If the torsion is <180º vaginal palpation of foetus is possible. At the terminal stages of pregnancy, colic like signs are obvious and labour contractions are observed following sings of lambing[1,5]. Unlike large ruminants, where diagnosis and evaluation of extent of uterine torsion is easy, it is difficult to diagnose in ewe by vaginal examination due to the closure of the cervix[3,6,7]. Thus, the treatment plan consists of rotating per vaginal foetus, surgical detorsion and caesarean section depending on the degree of torsion of the uterus[3]. Although some reports are available about uterine horn torsion[2,8], this case is the first report of the partial foetal retention due to the dystocia resulting from unilateral partial uterine horn torsion in a ewe.

CASE PRESENTATION

A 3-year-old, multiparous pregnant Merinos breed ewe was presented with the history of dystocia to Faculty Clinics of Veterinary Medicine, Bursa Uludag University. According to narrated history, ewe started the lambing signs 3 days ago and gave one lamb without any manual aid. At 2nd days after first delivery, straining started again, but no lamb was delivered. The owner suspected foetal retention due to ongoing strain and checked to birth canal for possible lamb. And, he palpated a second foetus, and he was able to bring only the caudal part of the foetus (both the posterior limbs and the caudal abdomen). He could not remove the cranial part of the foetus, and second half of foetus could not be delivered spontaneously, as well. Considering to this anamnesis, a half foetus was in uterus.

On clinical examination, the ewe was lying on lateral side, and vulva was swollen and enlarged with reddish brown discharge. The ewe had 39.2°C rectal temperature, normal mucosal colour, 2 seconds capillary refilling time, rapid and shallow respiration and inability to stand up. Abdominal palpation revealed distension and pain. On radiographical examination, remaining parts of the foetus were observed at the caudal abdominal cavity as shown in Figure 1. Vaginal examination revealed that cervix was fully dilated and there was no abnormality at this level, which might create any stenosis of the vagina leadings to dystocia. Per-vaginal examination indicated that the cra-

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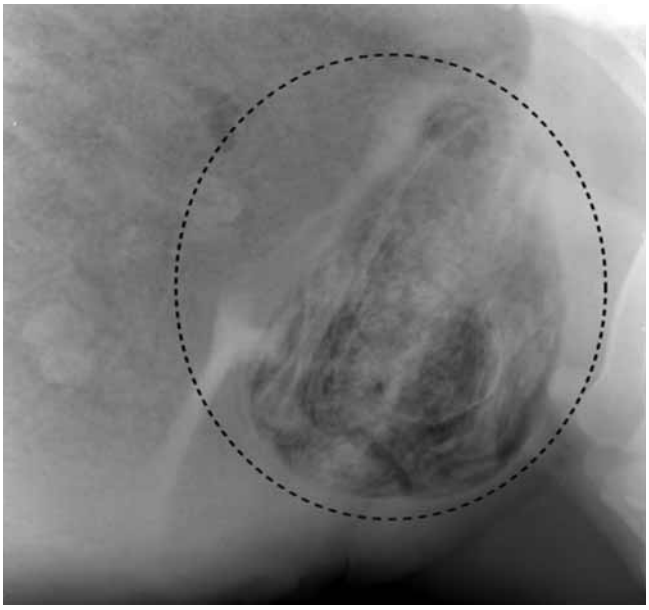

Figure 1 - This radiological view points out the remaining parts of the fetus (in dashed ellips) in the abdominal cavity.

nial parts of the foetus were at left sided location, but removing is impossible due to uterine horn torsion. Peripheral blood samples were taken for haematological analysis, and all parameters were within the reference ranges.

The clinical and radiological results were informed to the owner and caesarean section was decided. The ewe was sedated with xylazine HCl (Alfazine, Alfasan/Egevet, Turkey) (1 mg/kg, im.) and then the peripheral vein was catheterized and 0.9% isotonic NaCl solution was given pre-, per- and postoperatively. After the shaving of the left flank region, ewe was brought to the lateral position on the operation table, and then surgical preparation of the operation area and local anaesthetic infiltration with lidocaine HCl (Adokain, Sanovel, Turkey) were performed. Incisions and dissections from left flank region were made to approach the abdominal cavity. In the exploration, a congestive enlarged left uterine horn was observed. The appearance of the other uterine horn was normal.

Figure 2 - The appearance of the remaining cranial parts of the fetus in the uterine horn torsion after removal.

It was seen that the cranial ½ of the left uterine horn rotated approximately 270 degrees clockwise, and the uterus colour was changed from the torsion site. After the torsion was corrected, the incision was made in the longitudinal direction to the uterus, and the remaining cranial parts of the lamb were taken out (Figure 2). Two goblets containing 500 mg chlortetracycline HCl (Devamisin, Vetas, Turkey) were placed in the uterine horn and the incision line on uterus was sutured continually (Figure 3). After the last intraabdominal exploration, all anatomical structures of the left flank were closed routinely. Postoperatively, flunixin meglumine (1.1 mg/kg QD) (Fluvil, Vilsan, Turkey) was administered intravenously as analgesic, and amoxicillin clavulanic acid (10 mg/kg BID) (Synulox, Pfizer, Turkey) was given intramuscularly as antibiotic. These drugs were recommended for the next 4 days to the owner, and then the ewe was discharged. After ten days, it was informed by the owner that ewe was healthy and skin sutures were removed.

DISCUSSION

There is little information about to prevalence of dystocia in ewe, because many reasons are responsible for this such as irregular record keeping and treatment expenses[9,10]. Dystocia due to uterine torsion is rare in ewes, and it is commonly defined as the revolving or twisting of the uterus[3]. Mortality rate in ewe is 3.8% on account of dystocia in sheep[10]. Here, partial uterine horn torsion and its clinical and intraoperative results were reported in a ewe. Although the aetiology of uterine torsion is unclear, factors such as uterine contractions, foetal movements,

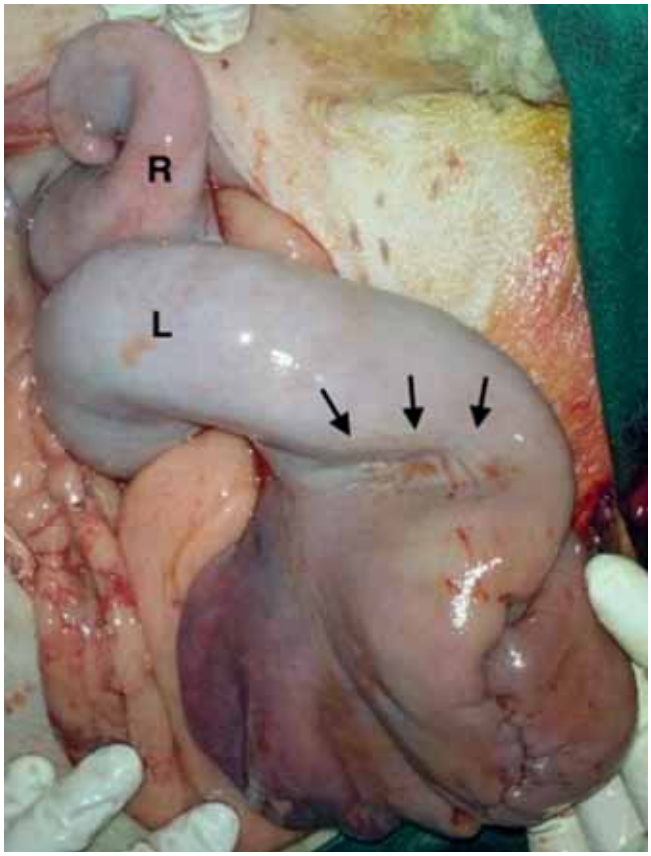

Figure 3 - Intraoperative view of the detorsioned uterine horn after suturing. **Arrows** show the torsioned part. **R**: Right uterine horn, **L**: Left uterine horn.

rough handling during gestation, decreased tone of the gravid uterus, flaccid uterine walls and long flaccid mesometrium have been considered in gravid animals[11]. In this presented case, based on the anamnesis, it was predicted that after the first offspring was removed, torsion was formed in the left uterine horn as a result of continuation of uterine contractions, and during the intervention of labour, the offspring could not be removed due to torsion, and foetal retention occurred.

In ewe with uterine torsion, initial examination may be too late to save the lambs or ewe[3]. Diagnosis is particularly difficult in pregnant ewes, as in such cases; it is impossible to detect alterations of any kind in the vagina due to the closure of the cervix[5]. In general, the torsion occurs at the level of the cervix. Diagnosis of the uterine horn torsion in the sheep is difficult; as vaginal and rectal access is limited[2]. In our case, despite the cervical opening, dystocia was interfered by the owner and the caudal part of the foetus was removed. In the per-vaginal examination, it was felt that the cranial part of the foetus was directed to the left and it was impossible to remove it manually due to uterine horn torsion. In uterine problems, a complete blood count can be helpful in determining the severity of the problem and its prognosis[12]. In cases with uterine torsion, mortality is typically high, probably due to prolonged parturition associated with the healthy condition and subsequent foetal hypoxia[13]. In parallel with the clinical findings and images during the surgical exploration, the haematological findings of the presented case were within the reference ranges.

As with large ruminants, the rotation method is not suitable for the correction of uterine torsion, as the torsion direction in sheep is not fully understood[3]. The torsion is successfully corrected by surgical intervention through left flank caesarean section[3,5]. Thus, the left flank surgical approach was planned to correct the uterine horn torsion and to perform the caesarean section in the ewe. During intraabdominal exploration, it is still valuable method for the assessment of uterine torsion by spiral folds formation[6]. It is reported that surgical intervention is the method of choice for the treatment of uterine torsion on the basis of high success rate in corrected cases as 94.5%[14]. In intraabdominal exploration, colour change and torsion in the uterus were seen, and in our case, a 270-degree clockwise torsion was determined in the cranial 1/2 part of the left uterine horn. Following to correction of the torsion, the cranial parts of the foetus were removed from the uterine horn. The general condition of the ewe was good after surgery.

CONCLUSIONS

In conclusion, uterine torsion is the cause of dystocia, and especially in cases with partial uterine torsion, emergency caesarean section should be planned after clinical diagnosis, since the foetus cannot survive.

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