ShortCommunication

DOI: 10.48165/ijar.2024.45.02.23

The Indian Journal of Animal Reproduction

The official journal of the Indian Society
for Study of Animal Reproduction

Year 2024, Volume-45, Issue-2 (December)

ISSN 0970-2997 (Print)

ISSN 2583-7583 (Online)

Successful Management of Hysterocele in a Pregnant Goat

Avula Vijaya Varshini*, Chetan Kishorrao Lakde, Dilip Singh Raghuwanshi, Ajay Pandurangrao Gawande and Manoj Subhash Patil

Department of Animal Reproduction,Gynaecology and Obstetrics,Nagpur Veterinary College, MAFSU, Nagpur 440006 Maharashtra

ABSTRACT

A female goat with a full term pregnancy aged 1 1⁄2 year was reported to Teaching Veterinary Clinical Complex, Nagpur with the complaint of swelling in the ventral abdomen for one week. Fetal parts were able to palpate at the swollen part. On genital examination, it was observed that the fetus is not in the pelvic cavity. By ultrasonographic examination, a fully developed fetal skeleton with no cardiac activity was noticed. The swollen abdomen indicated that the fetus might come away from the uterus. It was diagnosed as a rare case of "Hysterocele". Immediately, Cesarean section was done aseptically and the dead fetus was removed manually. Hernial part was corrected by Herniorrhaphy. Fluid therapy, antibiotics, antihistamine injections were given for one week. Animal was recovered by exhibiting normal behaviour within 15 days.
Keywords: Goat, Hysterocele, Cesarean Section, Herniorraphy

How To Cite: Varshini, A. V., Lakde, C. K., Raghuwanshi, D. S., Gawande, A. P., & Patil, M. S. (2024). Successful management of hysterocele in a pregnant goat.
The Indian Journal of Animal Reproduction, 45(2), 108-112,10.48165/ijar.2024.45.02.23

INTRODUCTION

Dystocia is defined as abnormal or difficulty in giving birth. It is the most common condition in small ruminants resulting in economic loss to farmers by the death of kid or dam or both (Singh *et al.*, 2022). Fetal causes include abnormalities in presentation, position, posture, oversized fetus and congenital abnormalities. Maternal causes include ring womb, narrow pelvis and uterine inertia, uterine rupture and ectopic pregnancy which can be prone to dystocia in does. Does have higher incidence of dystocia than ewes.Hernia is the protrusion of visceral organs through a normal or abnormal opening in the body. Unilateral ventral abdominal hernia resulting in hysterocele of gravid uterus is unusually seen in doe and ewe during the last month of gestation (Murugavel *et al.*, 2002). It is visible by enlargement of the lateral abdomen, especially towards the right side by any injury due to kicking, blowing, falling on blunt objects, horn fighting or automobile accidents. It is reported in goats rarely and incidence is 32.3% but exact causes are not known (Jettennavar *et al.*, 2010). It may occur due to weakening of abdominal muscles in advanced pregnancy with multiple fetuses or breakage of pre-pubic tendon (Vijayanand *et al.*, 2012) and utero-peritoneal adhesions (Erdogan *et al.*, 2015). The cause of uterine rupture is largely unknown but may be due to violence or trauma, uterine torsion, weakening of uterine musculature or chronic perimetritis. However, most hernias can be managed by performing herniorrhaphy but extensive abdominal wall defects should be corrected by perform-

*Corresponding author.
E-mail address: avijayav95@gmail.com (Avula Vijaya Varshini)
Received 10.05.24; Accepted 26.11.24

ing hernioplasty Cesarean section is a safe procedure for successful management of dystocia if carried out as early as possible.

CASE HISTORY AND OBSERVATIONS

A female goat with full term pregnancy aged 1 1⁄2 year was reported to Teaching Veterinary Clinical Complex, Nagpur with the complaint of swelling in the ventral abdomen bilaterally along with the udder since last month. Gestation period was completed but there were no signs of straining observed by the owner. On palpation of the swelling part, fetal parts with pain were noticed. On clinical examination, feed intake and water intake were reduced with normal body temperature and conjunctival mucous membrane. The dam was dull and depressed. No vaginal discharge was observed. On per vaginal examination, no fetus was palpated and the cervix was completely closed. On ultrasonographic examination of the swelling area, a fully developed fetus was observed with no heartbeat. On the basis of history and clinical observations, it was diagnosed as ventral abdominal hernia (hysterocele) of the gravid uterus. As an emergency, it was decided to perform a caesarean section for delivering the fetus and immediate herniorrhaphy for repair of ruptured abdominal wall.

TREATMENT AND DISCUSSION

The dam was kept on lateral recumbency. The operative site was aseptically prepared and anaesthetized with a linear infiltration of 5 ml of Inj.2% Lignocaine hydrochloride locally. A paramedian surgical incision was given on hernial ring i.e., centre of the herniated portion of left lower abdomen. The skin, peritoneum and uterus were incised as per standard procedure. Gravid uterus was exposed after skin as the muscle was ruptured. A tear of about half hand length in the lower abdominal muscle was observed. Further, the incision of the skin was extended. Uterus was incised and the dead emphysematous fetus along with fetal membranes was removed manually by traction. The uterus was found herniated through the oblique abdominal muscles into the subcutaneous space. The uterus had appeared necrotic along with adhesions in the ventral abdomen. Hysterectomy was done after removing the adhesions manually. The hernial ring was freshened, and herniorrhaphy was performed by overlapping mattress sutures.

The muscle layers, subcutaneous tissue and the skin were closed successively in a routine manner. Animal was administered by fluid therapy, antibiotics, anti-inflammatory and analgesic injections and supportive therapy for one week and also advised Khurak powder- 5g BID daily. The animal had recovered uneventfully within ten days. Surgical incision was completely healed and sutures were removed. The physiological status had appeared normal and abdominal swelling had also regained its original shape and size within one month.

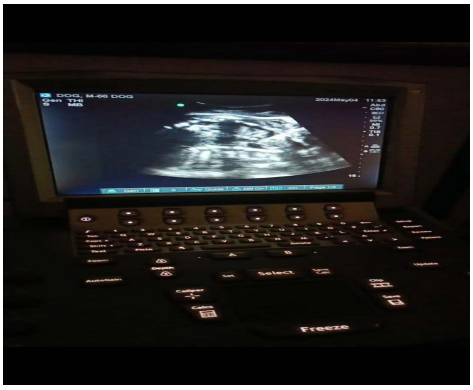
In this case, the fetus reaches a recognizable size in the uterus, and escapes in the abdominal cavity. Uteroperitoneal adhesions prevent the mobility of the uterus within the abdominal cavity resulting in decreased dilatation of cervix and explosive forces to deliver the fetus. Extreme abdominal distention, weakness of the abdominal muscles, and traumas (kicking, horn fighting, and injury by blunt objects) are predisposing factors for hernia. Rupture of the prepubic tendon might increase the weight

In this case, the fetus reaches a recognizable size in the uterus, and escapes in the abdominal cavity. Uteroperitoneal adhesions prevent the mobility of the uterus within the abdominal cavity resulting in decreased dilatation of cervix and explosive forces to deliver the fetus. Extreme abdominal distention, weakness of the abdominal muscles, and traumas (kicking, horn fighting, and injury by blunt objects) are predisposing factors for hernia. Rupture of the prepubic tendon might increase the weight of the gravid uterus resulting in ventral abdominal hernia. It is more complicated because it injures the udder due to closeness to the ground and the animal heights, most commonly seen in Shami does.

Diagnosis of hernia is easy as the hernia ring can be felt in most cases but prognosis is guarded. Treatment should be based on the condition of the animal and the type of hernia. Both utero-peritoneal adhesions and hysterocele can cause prolonged fetal retention in small ruminants (Sharun *et al.*, 2019). They are in need of correction by immediate caesarean section if the fetus is full-term and live (Kumar *et al.*, 2018). Herniorrhaphy is useful in case of large hernia opening but hernioplasty is useful in extensive ventral abdominal hernia (Jettennavar *et al.*, 2010). Delay in treatment of dystocia leads to an increased risk of losing the lamb and dam and prolonged dystocia in ewes causes necrotic metritis which is usually fatal. The gravid horn trapped within the hernial sac can get ruptured, affecting the viability of the fetus (Peker *et al.*, 2019). Obstetrical disorders in small ruminants are always related with huge economic loss (Ali *et al.*, 2019). The successful management of dystocia in goats depends on the condition of the animal, time of presentation and the degree of damage (Manjusha *et al.*, 2020). Hernias show several negative effects such as reducing the productivity and reproductivity of the affected animals.

Fig. 1: Goat with completed gestation

Fig. 2: Ventral abdominal distension



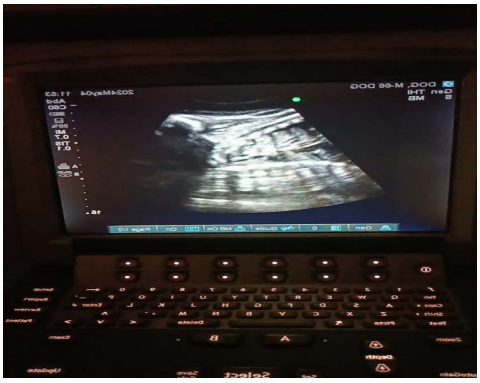


Fig. 3:Ultrasonographic examination showing the presence of fetus with prominent ribs

Cesarean section

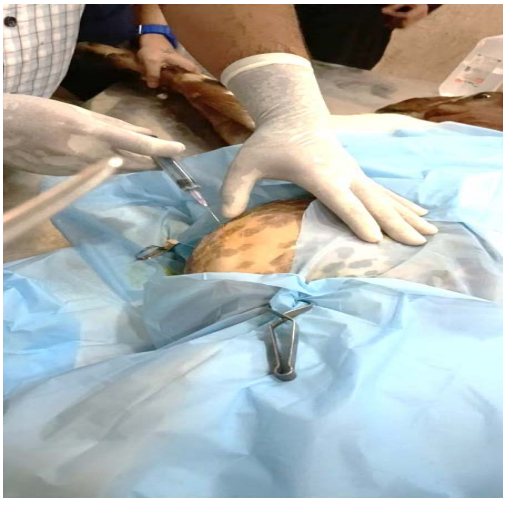


Fig. 4: Linear infiltration of 2% Lignocaine

Fig. 5: Incising the surgical site

Fig. 6: Incising the uterus

Fig. 7: Removing the fetus by traction

Fig. 8: Dead emphysematous fetus

Fig. 9: Removal of fetal membranes

Fig.10: Utero-abdominal adhesions

Fig. 11: Ligation of uterus by trans-fixation sutures

Fig. 12: Removed necrotic uterus

Fig. 13: After hysterectomy

CONCLUSION

A rare case of dystocia due to hysterocele and its successful management was communicated. The doe survived after Caesarean section. Early diagnosis of fetuses by ultrasonography, good managemental practices like separation of pregnant females, timely observations of animals, eliminating traumatic issues in flock, maintenance of proper record would be essential to save the life of a kid and dam.

CONFLICT OF INTEREST

Authors do not have any conflict of interests.

REFERENCES

Ali, S., Zhao, Z., Zhen, G., Kang, J. Z., & Yi, P. Z. (2019). Reproductive problems in small ruminants (sheep and goats): a substantial economic loss in the world. *Large Animal Review*, ***25*(6):** 215-223.

Erdogan, G., Ucar, E. H., Peker, C., & Kilic, N. (2015). Prolonged co-twin foetal retention in a sheep: caused by hysterocele. *Large Animal Review*, ***21*(2) :** 87-89.

Jettennavar, P. S., Kalmath, G. P., & Anilkumar, M. C. (2010). Ventral abdominal hernia in a Goat. *Veterinary World*, ***3*(2):** 93.

Kumar, A., Katiyar, R., Gautam, D., Shivaraju, S., Prasad, J. K. and Ghosh, S. K. (2018). Hysterocele along with false or secondary extrauterine pregnancy in a goat: A rare case presentation. *Theriogenology Insight -An Int. J. Reprod. all Anim.*, ***8*(1)**: 45-47.

Manjusha, K. M., Sharun, K., Haritha, C. V., Lekshmi, S. A., Faslu, A. T., Rahman, K. S. and Sivaprasad, M. S. (2020). Management of Postpartum Uterine Eversion in a Doe Using Retention Sutures. *Int. J. Livest. Res.*, ***10*(1):** 88-93.

Murugavel, K., Alphonse, R. M. D., Antoine, D. and Raju, M. S. (2002). Successful surgical correction of ventral hysterocele in a goat. *The Indian J. Anim. Reprod.* ***23*(2)**: 198-199.

Peker, C., Uçar, E. H., Varoğlu, O. and Erdoğan, G. (2019). An uncommon fetal retention case: Ruptured ventral hernia in a sheep. *J. Hellenic Vet. Medical Society*, ***70*(4)**: 1901-1904.

Sharun, K.and Erdoğan, G. (2019). A Review: Obstetrical Emergencies in Small Ruminants. *Alexandria J. Vet. Sci.* ***62*(1).**

Singh, B., Kumar, R., Singh, S. V. and Singh, N. (2022). Successful management of a rare case of dystocia in a goat due to ventro-lateral abdominal hernia of gravid uterus. *Indian J. Vet. Sci. Biotechnology*, ***18*(1):**122-124.

Vijayanand, V., Gokulakrishnan, M., Rajasundaram, R. C. and Thirunavukkarasu, P. S. (2009).Ventral Hernia [Hysterocele-Gravid] in a goat–A case report. *Indian J. Anim. Res.* ***43*(2):** 148-150.