

PREPARTUM PROLAPSE OF GRAVID UTERINE CORNUA ALONG WITH RECTAL PROLAPSE AND ITS MANAGEMENT IN A DOE

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ABSTRACT

A 1½ year old Malabari doe in its 120 day old first gestation was presented with a complaint of cervico-vaginal and rectal prolapse which was already attended by a Veterinarian. On examination the case was diagnosed to be prepartum prolapse of gravid horn of uterus along with rectal prolapse. The condition was successfully managed by relieving one fetus from the prolapsed horn by hysterotomy, replacing the uterine horn and suturing the vaginal tear. Buhner's and purse string sutures were applied after correcting cervico-vaginal and rectal prolapse, respectively. The other twin fetus from opposite horn was relieved by caesarean section. The animal had an uneventful recovery.

Key Words: Prepartum prolapse, rectal prolapse, doe

INTRODUCTION

Uterine prolapse occur commonly in cow and ewe, less commonly in goats and rarely in mares. In doe, cervico-vaginal prolapse usually happen during last 2-3 weeks of gestation. Prepartum cervico-vaginal prolapse is associated with several factors like heredity, deficiency of calcium, excess estrogen, mouldy feed/feed containing estrogen and faulty management. Success of the treatment depends on type of prolapse, duration and degree of

damage. In rectal prolapse, one or more layers of the rectum protrude through the anus due to persistent tenesmus associated with intestinal, anorectal or urogenital disease. Preparturient vaginal prolapse may be complicated by rectal prolapse and retroversion of the urinary bladder and even of the gravid uterus and often undergoes considerable trauma and marked oedematous swelling (Noakes *et al.*, 2009). The present case discusses about the surgical management of prepartum prolapse of the gravid uterine horn and rectal prolapse in a doe.

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A 1½ year old Malabari doe in its 120 day old first gestation was presented to the University Veterinary Hospital, Mannuthy with cervico-vaginal and rectal prolapse. Rectal prolapse, which occurred on the previous day, was corrected by a Veterinarian and purse string sutures were applied. Animal was found to be active, but showing severe abdominal straining. On examination, it was found that the purse string sutures applied were ruptured, these sutures were passed through the rectal mucosa and the tear and infection of rectal mucosa may be the reason for present straining. Through the thin vaginal wall the uterus and foetal movements were visible.

The prolapsed masses were cleaned with mild antiseptic solution. By this time along with a severe straining, a tear occurred on the ventral floor of the vagina and one of the gravid uterine cornua with a live foetus prolapsed out (Fig.). On trans – abdominal palpation one more live foetus could be located in the other uterine horn.

Epidural anaesthesia was given using xylazine–xylocaine combination (Xylazine @ 0.05mg/Kg body wt. and lignocaine 2% solution @ 1ml/5 Kg body wt.). Inj. Isoxsuprine (1mg/Kg body wt. i/v) and dexamethasone (4mg i/v) were given to prevent smooth muscle contractions and shock. Washed and cleaned the prolapsed vaginal and rectal mucosa. Remnants of purse string sutures were removed. Attempts were made to reduce the pregnant uterine horn to the pelvic cavity through the vaginal tear by placing the animal in Utrecht position, but the efforts were futile. The foetus was removed from the uterus through an incision on the dorsal curvature of the horn. Tried to remove foetus in the other horn through this incision, but the efforts were unsuccessful. Sutured the uterine incision and reduced the uterine horn back into the abdominal cavity through the vaginal tear. The vaginal tear was sutured, cervico-vaginal prolapse was corrected and applied Buhner's suture. The rectal prolapse was reduced after

applying lubrication and purse string suture was applied. Then caesarean session was performed on the left paralumbar fossa under local infiltration anaesthesia and removed one foetus from the other uterine cornua. Both foetuses were live at the time of removal, but succumbed within few minutes due to immature growth. A dose of prostaglandin (Cloprostenol 250µg i/m) was administered for luteolysis. Postoperative therapy was given for a week using antibiotics, NSAIDs and systemic fluids. The animal had an uneventful recovery.

Cervico-vaginal prolapse is often encountered in all species of animals, but most commonly in cows and ewes (Roberts, 1986). But further complications of cervico vaginal prolapse like spontaneous rupture of vaginal wall in heavy pregnant ewes during last month of gestation with evisceration of intestines, caecum and omentum through the tear in the dorsal vaginal wall was reported in ewes and were found dead presumably due to shock (Scott, 2007). Complete postpartum eversion of uterus and abdominal viscera through vaginal tear were reported in buffaloes. In all the above cases, animal was found dead or sent for slaughter. Literature review could not yield the report of prolapse of prepartum gravid cornua through vaginal tear in any species. This article reports prepartum prolapse of gravid uterine cornua through a vaginal tear along with rectal prolapse and its successful treatment in a doe.

The precise etiology of cervico vaginal prolapse is still unknown and much of the evidence was often contradictory. The predisposing factors are said to be hormonal excess or imbalance, hypocalcaemia, large foetal load, fat condition, inadequate exercise, bulky food, excess dietary fibre, dietary oestrogens and their precursors, sloping terrain, vaginal irritation, inherited predisposition etc. The amount, the distribution and the type of collagen present in the vaginal wall may influence the compliance of the vaginal wall and the capacity of the vagina (Ayen and Noakes,

1998). Extrapolation of works with genitourinary prolapse in humans suggests that the mechanical strength of the vaginal wall is reduced by the change in the collagen type (Jackson *et al.*, 1996). Studies in human patients with prolapse revealed that the vaginal wall had more total collagen subtype III and greater active expression of the matrix metalloproteinases 9 compared with normal individuals (Moalli *et al.*, 2005). Oestrogens influence the vaginal collagen metabolism leading to significant reduction in total aged collagen, but an increase in new collagen. Preparturient vaginal prolapse may be complicated by rectal prolapse and retroversion of the urinary bladder and even of the gravid uterus, and often undergoes considerable trauma and marked oedematous swelling (Noakes, 2009). Zearalenone was reported to cause rectal and vaginal prolapse in pigs during pregnancy. Ennen *et al.* (2011) observed that peripheral concentrations of progesterone and estradiol-17 β do not have influence on the occurrence of vaginal prolapse and showed altered antepartal metabolism of vaginal connective tissue in ewes suffering from vaginal prolapse.

This case of prepartum gravid uterine horn prolapse with rectal prolapse in a doe was treated successfully and sutures were removed after seven days of surgery.

REFERENCES

- Aven, E. and Noakes, D.E. (1998). Distribution of collagen in the vaginal wall of ewes. *The Vet. J.*, 155(2): 213–215.
- Ennen, S., Kloss, S., Scheiner-Bobis, G., Failing, K. and Wehrend, A. (2011). Histological, hormonal and biomolecular analysis of the pathogenesis of ovine *Prolapsus vaginae ante partum*. *Theriogenology*, 75: 212–219.
- Jackson, S.R., Eckford, S.D., Abrams, P., Avery, N.C., Tarlton, J.F. and Bailey, A.J. (1996). Changes in metabolism of collagen in genitourinary prolapse. *The Lancet*, 347: 1658–1661.
- Moalli, P.A., Shand, S.H., Zyczynski, H.M., Gordy, S.C. and Meyn, L.A. (2005). Remodelling of vaginal connective tissue in patients with prolapse. *Obstet. Gynecol.*, 106(5): 953–963.
- Noakes, D.E., Parkinson, T.J. and England, G.C.W. (2009). *Veterinary Reproduction and Obstetrics*. 9th edn. Elsevier, London. P. 315.
- Roberts, S.J. (1986). *Veterinary Obstetrics and Genital Diseases*. 3rd Edn. Published by the Author, Woodstock, Vermont 05091. P. 981.
- Scott, P.R. (2007). *Sheep Medicine*. Manson Publishing Ltd., London. pp. 54–55.



Fig. Prepartum prolapse of gravid uterine horn along with rectal prolapse