

## OBSTETRICAL MANAGEMENT OF RECURRENT VAGINO-CERVICAL PROLAPSE USING VULVOPLASTIC TECHNIQUE IN A CROSSBRED COW

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### SUMMARY

Successful management of a recurrent post-partum vagino-cervical prolapse along with torn vulval lips and rectal prolapse by electrocautery aided vulvoplasty in a pluriparous crossbred Jersey cow is reported and discussed.

**Keywords:** Cow, Vagino-cervical prolapse, Vulval tear, Vulvoplasty

Genital prolapse in ruminants is considered as an emergency maternal disorder requesting immediate attention to avoid any further complication which can lead to a poor prognosis (Yimer *et al.*, 2016). Vagino-cervical prolapse (VCP) is a condition in cattle which is more common during the last trimester of pregnancy (Seema *et al.*, 2020). Occurrence of VCP is more common in pluriparous animals when compared to primiparous animals which may be due to injuries or over stretching of birth canal during the first or subsequent parturitions (Roberts, 1971). Occasionally it is seen after parturition and rarely occurs unrelated with pregnancy or parturition (Noakes *et al.*, 2001). The prognosis depends upon the type of case, the duration of exposure of the prolapsed mass and the degree of trauma inflicted upon the prolapsed mass (Kumar, 2005). Recurrent vaginal or vagino-cervical prolapse can be corrected by suture techniques like Vulval tape retention suture, Shoe lacing technique, Buhner's hidden purse-string suture, Halstead technique, Deep vertical mattress suture technique, Caslick's vulvoplasty or by fixation techniques like Modified Minchew's method, Winkler's method or by resection techniques like Farquharson's technique, Guard and Frank technique (Roberts, 1971; Ames, 2014; Prado *et al.*, 2016). The present communication has been placed to record a successful management of recurrent vagino-cervical prolapse in a crossbred jersey dairy cow using electrocautery aided technique.

A pluriparous crossbred Jersey cow was brought to the Large Animal Obstetrics Unit, Madras Veterinary College Teaching Hospital, Chennai with the history of recurrent cervico-vaginal prolapse also coupled with rectal prolapse following repeated treatment by local veterinarian. On physical examination, all vital parameters were within the normal range but the vagino-cervical prolapse was too

much edematous and protruded outside with multiple vulval tears (Fig. 1). The case was diagnosed as recurrent vagino-cervical prolapse and was decided to go for vulvoplasty to avoid reoccurrence which if not corrected properly may lead to pneumovagina followed by necrotic vulvovaginitis in future.

The animal was restrained under epidural anaesthesia using 3 ml of 2% lignocaine hydrochloride and 2 ml of adrenaline (Fig. 1). The prolapsed rectal mass followed by the vagino-cervical mass was repositioned after proper lubrication using liquid paraffin. The vulval lips were washed and prepared aseptically followed by removal of dead, necrotic tissues in the vulva and vagina with help of electrocautery (Fig. 2).

The dead space was closed using PGA size 2.0 absorbing suture material via simple continuous suturing technique. The subcutaneous tissue and skin were sutured using interrupted suture mattress with No. 2 silk material. The suture pattern allowed a small slit like space in the vulva for normal urination (Fig. 3) and the surgical site was dressed with cetrimide ointment. The animal was treated with Inj. Ringer's lactate @ 1000ml I/V, Inj. Ceftriaxone @ 6 g I/V, Inj. Meloxicam @ 75 mg I/M, Inj. CPM @ 10 ml I/M and the same was repeated for seven consecutive days. The surgical site had mild discharge and swelling which gradually decreased in the following week and the cow had an uneventful recovery with normal appetite, defecation and urination during an observation period of two months post operation (Fig. 4).

Incidence of chronic vaginal prolapse in ruminants may be due to weakness of uterine ligaments and vaginal tissue relaxation particularly in pluripara animals and excessive deposition of perivaginal fat of hereditary predisposition (Ames, 2014). Several factors involved in

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**Fig. 1-4.** (1) Recto vaginal prolapse; (2) Dead space in the vulva and vagina removal by using electrocautery; (3) Vulval patency; (4) Healed suture site

the etiology of VCP are hereditary, nutritional deficiencies, irritation in urogenital passage, perivaginal fat, pregnancy associated changes like relaxation and sinking of perineal structures, hypocalcaemia, high dietary oestrogen intake, hormonal imbalance and managemental practices (Noakes *et al.*, 2001).

Chronic cases of prolapse may be due to tenesmus resulting from trauma/inflammation of the exposed part or due to cervicitis and/or vaginitis (Kumar, 2005) and constant tenesmus may lead to rectal prolapse in recurrent cases (Roberts, 1971). Vagino-cervical prolapse is more common in confined than pastured cattle where lack of exercise may be a contributing factor along with unstable anchorage of the genital tract predisposing to various displacements (Fubini and Ducharme, 2016). Occasionally VCP can occur hand-in-hand with vulval rupture or perineal laceration in cattle (Manokaran *et al.*, 2012; Lakshmikantan *et al.*, 2018). Abnormal conformation of vulval labia may result in wind sucking and/or pooling of urine in the anterior vagina leading to pneumovagina and microbial invasion (Hudson, 1972).

Modified Caslick operation or vulvoplasty can be performed to control pneumovagina and tenesmus in cows with chronic postpartum prolapse (Roberts, 1971; Dehghani *et al.*, 2011; Ames, 2014; Prado *et al.*, 2016). But Caslick vulvoplasty could not be performed in the present case because of distorted vulval lips, hence, a simple vulvoplastic technique as in the case of dogs with recessed vulva (Mathews, 2001; Hammel and Bjorling, 2005) has been followed in the present technique for the correction of vulval tear and necrosis, with the help of electrocautery for an early recovery.

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