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## Management of estrual cervico-vaginal prolapse in a cross-bred Jersey cow: A case report

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### Abstract

A four year old pluriparous cross-bred Jersey cow was presented to the clinic with a history of intermittent prolapse of mass from the vagina during every estrus. Based on gynaecological examination, the case was diagnosed as estrual cervico-vaginal prolapse. After repositioning the prolapsed mass into the pelvic cavity, modified Buhner's vulval retention sutures were applied to prevent reoccurrence. Subsequently, the animal became pregnant following artificial insemination in the next estrus.

**Keywords:** Estrual cervico-vaginal prolapse, cross-bred Jersey, modified Buhner's vulval retention sutures, epidural anaesthesia

### Introduction

The descent of one or more pelvic structures (bladder, uterus, cervix, and vagina) from their normal anatomical position towards or through the vaginal opening is known as genital prolapse [1]. Common obstetrical problems such as prolapse of the cervix and vagina impair productive and reproductive performance by affecting the postpartum return to estrus, conception rate, and calving interval [2]. The prolapsed genital organs become enlarged, which leads to the lesions of acute inflammatory changes such as edema, congestion, and hemorrhage from the wounds. It is a life-threatening emergency that has to be treated right away to avoid serious complications such as excessive edema, mucosal deterioration, contamination, and deadly hemorrhage which leads to a grave prognosis [3-5]. Mismanagement of the prolapse will eventually result in irreversible damage to reproductive organs leading to infertility [5]. Three techniques, namely reduction, repositioning, and retention, can be used to treat genital prolapse. Evacuating the bladder and reducing the edema of prolapsed organs will result in easy handling of the case. An obstruction in the urethra caused by vaginal prolapse causes urine to be retained in the bladder. This increases the size of the prolapsed mass. Elevating the prolapsed mass upward straightens the kink in the urethra and releases the retained urine. An alternative method is to use a urinary catheter to drain it. The prolapsed mass develops edema due to occluded blood supply, lifting the prolapsed mass above the level of the ischial arch can reduce this edema [1]. While vaginal prolapse is seen in many species, it is more prevalent in cows during the peripartum period. Rarely, prolapse of the vagina or prolapse of the cervix and vagina was reported in cows during estrus. The present case puts on record about the successful management of cervico-vaginal prolapse during estrus in a cow.

### Case history and Observation

A four year old cross-bred Jersey pluriparous cow (two times calving) weighing about 300 kgs was presented to the large animal unit of VGO, Veterinary Clinical Complex, RIVER, with a swollen hard mass (Fig 1) protruding out from the vulva for the past two days. History revealed that the animal had intermittent recurrent prolapse of mass from the vulva during previous estrous cycles on the day of estrum. On clinical examination, all vital parameters are within normal range. Based on history and gynaecological examination, the case was diagnosed as estrual cervico-vaginal prolapse.

### Treatment

Potassium permanganate solution (1%) was used to clean the prolapsed mass to remove dead tissues, debris and dirt particles. The mass was applied with saturated saline solution to reduce the edema of prolapsed mass. Under epidural anaesthesia of 2% Lignocaine HCl, the mass was handled manually (Fig 2) and repositioned (Fig 3) into the pelvic cavity of its normal position. To prevent the reoccurrence of prolapse, modified Buhner's vulvar retention sutures were applied with umbilical tape by using Gerlach's perivaginal needle. The animal was treated with NSAID (Meloxicam), Anti-histamine (*Chlorpheniramine Maleate*) and Antibiotic (Enrofloxacin) and prescribed with an herbal antiseptic spray for topical application. After one week, sutures were removed and the suture wound was cleaned with povidone-iodine and advised the owner to apply antiseptic ointment regularly and to present the cow for artificial insemination (A.I) on the day of estrum in subsequent estrous cycle. During subsequent estrum, the animal was inseminated twice at 24 hours interval and administrated Inj. Gynarich (Buserelin acetate) 10 mcg I/M at the time of first A.I. After 45 days of A.I., the animal was subjected to ultrasonography for pregnancy diagnosis and it was confirmed as pregnant.

### Discussion

Estrual prolapse is common in bitches but sporadic in cattle [6]. It was reported that estrual prolapse was associated with a high level of circulating estrogens during estrum. A high level of estrogen was found to induce edema, relaxation of the vulva and vulvar sphincter muscles and relaxation of the pelvic ligaments and surrounding tissues [7] resulting in cervico-vaginal prolapse.



**Fig 1:** Cervico-vaginal Prolapse



**Fig 2:** Handling the mass



**Fig 3:** After repositioning the mass

### Conclusion

It can be concluded that estrual cervico-vaginal prolapse can be easily managed by reduction, repositioning and retention by applying modified Buhner's vulval retention sutures without affecting conception during subsequent estrum.

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