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## Vaginal and cervical prolapse complicated with herniation of urinary bladder in a cow: a case report

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### ABSTRACT

An eight years old cow in last month of gestation was presented by its owner to the clinic of Veterinary Medicine College, University of Mosul. The cow was suffering from a complicated case of vaginal and cervical prolapse. The complication included tearing of the vaginal floor and herniation of the urinary bladder through the tearing of vagina. The cow was treated under the caudal epidural anesthesia. Firstly the herniated urinary bladder was emptied and replaced to its correct position, then the tearing of vaginal wall was repaired, and finally the prolapsed vagina and cervix was replaced to its correct place.

## 1. Introduction

Prolapse of the vagina and cervix is a disorder of ruminants which occurs commonly in late gestation. It can be recognized by the protrusion of varying parts of the vaginal wall and sometimes the cervix through the vulva so that the vaginal mucosa is exposed<sup>[1]</sup>. The exact cause of the disorder has not been ascertained<sup>[2]</sup>. In some cases, the urinary bladder is trapped within the prolapse and cannot be emptied, and thereby causes further enlargement of the prolapse<sup>[3]</sup>.

This report describes a complicated case of vaginal and cervical prolapse with herniation of urinary bladder in a cow, and the way it was handled.

## 2. Case report

An eight years old cow in last month of gestation was presented by its owner to the clinic of Veterinary Medicine College, University of Mosul. The owner information indicated that the cow was suffering from vaginal prolapse since 12 h; the prolapsed part was increased gradually with time. The owner tried to help the cow, but the case was complicated by big sac through the vaginal wall. Also the cow had a history of vaginal prolapse in the previous gestation.

The cow was examined carefully, where found it had a prolapsed vagina and cervix, but it had also a hanging fluid-filled sac under the prolapsed vagina reached to the hock joints (Figure 1). After examination of the hanging sac appeared it was the urinary bladder, which was protruded through a tearing in the floor of the vagina and hanged by the urethra.

The cow was treated under the caudal epidural anesthesia. The exposed surface of the vagina and urinary bladder

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were cleaned with warm clean water, followed by sterile physiological saline solution. The urinary bladder was gently emptied by elevating of the bladder at the level of urethra and applying of diffuse pressure on bladder surface. After that, the bladder was replaced in its correct position and a Foley catheter was left through the urethral orifice. The torn vaginal floor was repaired using a chromic catgut and simple continuous pattern. Finally the prolapsed vagina and cervix were replaced in to its correct place, and the vulval lips were sutured by a horizontal mattress suture technique using strong gauze saturated with lugols' iodine. The Foley catheter was fixed on vulval lips by two simple stitches of silk. The cow was given 4 millions IU of penicillin and 4 g of streptomycin (Combi–Kel 20+20, Kela Laboratoria, Belgium) intramuscularly, daily for 5 days.



**Figure 1.** Vaginal and cervical prolapse in cow with hanging of urinary bladder through a tearing in the floor of the vagina.

### 3. Discussion

As knowledge of the authors, this is the first report of urinary bladder herniation through a tearing in prolapsed vagina. The case happened due to trapping of the urinary bladder within the prolapsed vagina causing enlargement of the prolapse. When the owner tried to help the cow, he torn the vagina therefore the urinary bladder herniated outside. The peritoneal surface of the bladder was visible; therefore the case was diagnosed as a herniation of urinary bladder not as a prolapse of urinary bladder. Foley catheter was left in place to prevent filling of the bladder. After 48 h the owner reported that cow was doing well, and there was no other complication.

### Conflict of interest statement

We declare that we have no conflict of interest.

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