Extraordinary periparturient disorders in dromedary camel

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Abstract

This study aimed to present and document some uncommon periparturient disturbances recognized in dromedary. Five female camels with extraordinary periparturient disturbances were examined and defined at the Veterinary Teaching Hospital of Qassim University. The five uncommon periparturient cases displayed (1) prepartum vaginal tearing accompanied by total uterine dislocation, (2) parturient vaginal tear and entrance of the fetus throughout the torn vagina, (3) parturient uterine prolapse attended by uterine tearing and crossing the fetus and intestine through the torn uterus, (4) postpartum vaginal rupture accompanied by displacement of the uterus and intestine, and (5) postpartum uterine prolapse involved with uterine tearing and displacement of the intestinal loops. The casual remark in greatest observed cases was the periparturient tearing or rupture of the vaginal wall accompanied with prolapse or displacement of the uterus and/or the intestine. The presumable causes of vaginal rupture and evisceration are tenesmus, injury due to the oversized fetuses, narrow cervix and uterine torsion. In conclusion, vaginal tearing has severe complexities on female camels that demands immediate intervention. Exceptional attention should be paid for female camels during late pregnancy, and shortly after parturition.

Key words: Camel, Dystocia, Postpartum, Pregnancy, Complications.

1. Introduction

Periparturient is defined as the time just before, during or immediately after parturition. The female dromedary camel is a seasonal breeder, with gestational length ranged from 12 to 13 months (1, 2, 3). The placenta is of diffuse type, while the opening, fetal and placental expulsive stages extended from 12 to 48hr, 5 to 50 min and 0.5 to 3hr, respectively (4, 5).

Dystocia has adverse effects on the calf viability, milk production and fertility (6). In a study on 60 cases of dystocia in female dromedary camels, uterine torsion was the most frequent cause (33.3%). Abnormal posture and feto-pelvic disproportion have been encountered for 26.7%, and 21.7%, respectively. Narrowing cervix, abnormal presentation, and vaginal prolapse have also observed as causes of dystocia (7).

The present study aimed to present some unusual periparturient complications observed in female dromedary camels at the Veterinary Teaching Hospital of Qassim University.

2. Cases presentation

First case

An 8 y pluriparous female camel was admitted to the clinic in poor physical condition with the uterus (pregnant and non-pregnant horns) and ovaries appeared outside the vulva (Figure 1). She was dehydrated, hypothermic, depressed, non-ambulatory and in a state of shock. She was in the last month of pregnancy. A left dorsolateral tear was found in the vagina with a perforation of the wall close to the cervix. The animal was euthanized at the command of the owner.
Figure 1. Pre-partum vaginal tearing followed by complete uterine dislocation.

Second case

In a 9 y pluriparous female camel and due to strong tenesmus during parturition against a closed cervix, the vagina ruptured and the fetus passed through the torn vagina. Sedation and epidural anesthesia could not prevent the steady strong contractions. Finally, the fetus followed by the intestine passed through the ruptured vagina (Figure 2). The animal was euthanized after consulting the owner.

Figure 2. Parturient vaginal rupture and passing the fetus through the torn vagina.

Third case

A full-term, 10y pluriparous female camel was presented to the clinic with partial uterine prolapse and severe bleeding. The animal showed excessive contractions resulted in uterine tearing. The fetal legs and the intestine appeared through the torn uterus (Figure 3). The animal was in bad physical condition. She was euthanized at the request of the owner.

Figure 3. Parturient uterine prolapse followed by uterine tearing and appearance of the fetal legs and intestine through the torn uterus.

Fourth case

A 12 y pluriparous female camel was admitted to the clinic with a history of excessive traction due to a big-sized fetus. The uterus expelled through a tear in the left lateral wall of the vagina (Figure 4). The animal was recommended to be euthanized.

Figure 4. Post-partum vaginal tearing followed by dislocation of the uterus.

Fifth case

In a 12y pluriparous female camel, the pregnant horn prolapsed just after normal parturition. The uterus was accidentally torn. After 24 h, the animal was presented to the clinic with a torn uterus, while the intestinal loops expelled through it. The intestine and uterus were washed with normal saline, sutured and reduced to the normal position (Figure 5). Systemic antibiotic and anti-inflammatory drugs were administrated.

Figure 5. Postpartum uterine prolapse complicated with uterine tearing and diolocation of the intestinal loops.
3. Discussion

To date, this is the sole report of cases of unusual periparturient complications in dromedary camels. The common finding in most observed cases was the periparturient tearing or rupture of the vaginal. Further, all these cases, except one (the fourth case), had no history of mechanical struggling or rough handling. The probable causes of vaginal rupture and evisceration are tenesmus, trauma due to the oversized fetuses, narrow cervix or uterine torsion. The circulatory disturbance in the reproductive organs caused by the uterine torsion potentially weakens the vaginal wall. This weakness, in addition to excessive tenesmus, results in increased tension in the uterine ligaments (8,9). The exact causes of uterine torsion, however, are not well defined, but they include factors such as vigorous fetal movement, rolling of the mare, sudden falls, a large fetus in a relatively small volume of fetal fluid, lack of tone in the pregnant uterus, a long mesometrium, and the presence of a large, deep abdomen (8,9,10).

Rupture of the gravid uterus has been observed in bitches, which may result from uterine torsion or trauma (11). Moreover, rupture during the whelping occurred in cases in which the uterine wall was compromised by the presence of infection, a dead fetus, uterine torsion, careless obstetrics procedures and in cases received large doses of oxytocin (12).

The exact pathogenesis of the third case (parturient uterine prolapse) is not fully understood, and the question was how did the uterus come first (prolapsed) before the fetus? Many possible explanations for what has happened but one scenario could be suggested; (a) insufficient opening of the cervix; (b) excessive straining; (c) prolapse of vagina followed by part of the uterus or even uterine rupture. In horses, a rupture can happen when the fetus enters the birth-path in a wrong position, in case of torsion, retroflexion, or rarely spontaneously, often combined with, triggering or triggered by excessive labor (13-15).

The most suitable therapeutic approach for such patients is an intravenous fluids therapy, epidural anesthesia eventually preceded by sedation if the animal is very agitated and does not yet show any signs of shock. This should take care of excessive labor/straining. Repositioning of the torsion or the fetus is a must. There are drugs like prostaglandin E2 aimed at assisting slackening of the cervix, not 100% but may help (16). In any case, a cesarean section should be considered.

In conclusion, special precautions should be taken for female camels during late pregnancy, at and shortly after parturition. Separation of late pregnant camels and close observation during labor and the postpartum period are essential to control such periparturient complications. Moreover, early and definitive diagnosis can help in guaranteeing a successful outcome.

Conflict of interest

The authors confirm that they do not have any conflict of interest.

References


