



Case Report

Hemorrhagic Vulvar Discharge Caused by Vestibule Trauma in a Nonpregnant Thoroughbred Mare



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ABSTRACT

A 12-year-old Thoroughbred mare presented with a history of frank, acute, hemorrhagic vulvar discharge. The mare had delivered five healthy foals before being donated to the university and was currently not pregnant. The mare was housed with a small group of Thoroughbred and Quarter Horse mares, and while being moved to another pasture, the subject mare was witnessed by caretakers and one of the authors to be attacked (bitten) by a herd mate in the perineal region. Hemorrhagic vulvar discharge was noted immediately thereafter. The mare was sedated, and the urogenital tract was thoroughly examined via vaginal palpation and speculum as well as transrectal ultrasonography. A defect involving the mucosa and submucosa of the vestibule was identified as the source of the hemorrhage. The wound was cleaned and sutured to speed up the healing process. The mare was treated with flunixin meglumine for 2 days and antibiotics for the next 5 days and was completely recovered 2 weeks after the incident. Several causes have been identified in association with hemorrhagic vulvar discharge. In the present case, the cause was easily identified as being trauma-induced due to the fact that incident had been witnessed to have occurred. In other instances where this is not the case, a systematic approach to diagnosing the source of blood must be implemented.

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1. Introduction

Several causes of bloody vulvar discharge have been reported in mares. To name a few, rupture of ovarian and/or uterine artery or veins, vestibule and/or vaginal varicosities, endometrial hyperplasia, uterine neoplasia, placentitis, premature placental separation, mating-induced tears, hymen rupture, urinary bladder calculi, infections, and tumors [1–5]. Fortunately, most causes of bloody vaginal discharge are not life-threatening. However, until a thorough physical examination and detailed history evaluation can be attained, hemorrhagic vulvar discharge should receive immediate veterinary attention.

Epidemiologic data regarding the true prevalence of bloody vulvar discharge in mares are lacking. It appears that outside natural breeding situations, varicosities in the vaginal vestibule area are the most prevalent cause of bloody vulvar discharge in pregnant and nonpregnant mares, followed by rupture of the utero-ovarian artery and/or veins in periparturient mares. In the breeding shed environment, hymen ruptures in maiden mares are observed frequently and are associated with scant, bloody vulvar discharge of short duration. However, other causes such as uterine neoplasia and vaginal tear and perforation are seen less frequently.

In the present case, trauma inflicted by a herd mate was found to be the cause of hemorrhagic vulvar discharge in a nonpregnant mare. Herein, using a unique clinical case, we discuss various causes of bloody vulvar discharge in mares and predict that the present case report has value as an educational material for equine practitioners.

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2. Case Description

A 12-year-old Thoroughbred broodmare was presented to determine the cause of a frank hemorrhagic vulvar discharge. Previously, this mare served as a commercial broodmare delivering five viable foals, the last of which was delivered 12 months before donation to the university. Mating or gynecologic evaluations of the tubular genitalia were not carried out in the preceding 9 months. On arrival, this mare, along with other Thoroughbred and Quarter Horse mares, was kept under quarantine in a common paddock (2.5 acres) for 30 days. As part of the quarantine protocol, each mare in the group had a rectal temperature measured daily by the farm personnel. Nasal swabs and blood samples were collected on a weekly basis. Mares were supplemented with hay, grain (0.9 kg [2 lb]/d), water *ad libitum*, and trace minerals. While this group of mares were being moved to an adjoining paddock in the quarantine, one of the mares was seen by the farm personnel and one of the authors to attack (i.e., bite) the subject mare on the perineum. Vulvar hemorrhage was noted immediately after the attack, and the mare received veterinary attention within 5 minutes of the occurrence. The day before this episode, the mare had a Caslick's operation (estimated 15 cm, equivalent to two-thirds of the total vulvar length). Acutely, the mare was trembling and agitated, and detomidine hydrochloride (0.002 mg/kg [0.00091 mg/lb], IV; Dormosedan; Pfizer Animal Health, Exton, PA) was administered before safely being hand-walked and placed in stocks. Thereafter, the mare's tail was wrapped for examination. The perineum was bloodstained, superficial lacerations of the vulvar lips were present, and frank hemorrhage was noted from the ventral commissure of the vulva (Fig. 1).

3. Results

The mare's perineum was thoroughly scrubbed with chlorhexidine and rinsed with water. A large extent of the Caslick's suture was destroyed during the incident, and only about 3 cm remained intact. Examination of the vestibule revealed a traumatic laceration (triangular in shape, ~15-cm long and ~10-cm wide, vertex pointing to the vulvar opening), medially located in the ventral vestibule wall. The laceration was noted to involve the mucosa and submucosa, as well as underlying blood vessels, resulting in significant vulvar hemorrhage (Fig. 2). The damage extended 2 cm caudal to the external urethral sphincter.

To help reduce the bleeding and allow further clinical examination, a sterile gauze pack was held on the lesion while applying constant pressure. The external urethral sphincter was thoroughly examined, and a vaginal speculum examination revealed a closed cervix, no varicosities, or any other abnormalities in the vagina or vestibule. Transrectal palpation and ultrasonography examination revealed a well-toned normal diestrus uterus, absent endometrial edema or intrauterine fluid accumulations, multiple small follicles on each ovary (<10 mm), two corpora lutea, and a bladder with no obvious abnormalities.

Once the area was thoroughly cleaned with a dilute betadine solution (1:1,000 v/v sterile saline), the lesion was



Fig. 1. Hemorrhagic vulvar discharge in a Thoroughbred mare. Note that the perineum was bloodstained as consequence of a continuing hemorrhage. This mare had a vulvoplasty on the day before being attacked by another mare herd mate. The bite wound tore the Caslick's suture, and as a consequence, caused mild laceration of the vulvar lips in addition to the internal lesions described in Fig. 2.

sutured in a continuous interlocking pattern with polydioxanone 2.0 (PDSII 2; Ethicon, Somerville, NJ). The mare received gentamicin sulfate (6.6 mg/kg [3 mg/lb], IV, SID; Gentamax; Phoenix LLC, St Joseph, MO) and procaine penicillin G (22,000 IU/kg [9,980 IU/lb], IM, BID; Penject; Butler Schein Animal Health, Dublin, OH) for 5 days. Flunixin meglumine (1.1 mg/kg [0.5 mg/lb] IV, BI; Banamine; Schering-Plough Animal Health Corp, Union, NJ) was administered for 2 days. The mare's urination, defecation, and rectal temperature were monitored daily for a week. The surgical site was rechecked at 1, 3, 5, and 15 days after the incident. The Caslick's operation was replaced at the last recheck. No surgical complications were observed, the lesion was completely healed by the last recheck (i.e., 15 days), and the absorbable suture was not removed. The mare displayed normal demeanor, apparently normal urine and manure production. Rectal temperature remained within normal ranges (data not shown).

4. Discussion

Hemorrhagic vulvar discharge is an abnormal clinical finding that can be associated with problems located in the reproductive tract, urinary tract, or vestibule (common opening to both tracts) [1]. Common causes of bloody vulvar discharge in nonpregnant mares include vestibule vaginal varicosities, hymenal rupture, and vaginal perforation in mated mares. Less common reproductive problems would include uterine neoplasia, endometrial, stromal or epithelial hyperplasia, fetal retention, and

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