Unilateral Bartholin’s gland Cyst in a Holstein Friesian Crossbred Cow

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Abstract

A Holstein Friesian crossbred cow calved two times was brought with the history of infertility. Examination showed a unilateral Bartholin’s gland cyst on the left side of the vagina. The cyst was punctured, drained, and washed with antiseptic solution. The base of the cyst was incised and the vaginal wall was sutured with catgut No.2. The microbiological examination of the cyst was negative for active organisms. Cystic Bartholins gland is more common in cows which are aged or had history of dystocia with necrotic vulvo-vaginitis; no such cause was found in this case.

Key words: Cow, Bartholin’s gland, Cyst, Vaginal Wall

Introduction

Bartholin’s glands also called as vestibular glands located in the constrictor muscles of the vestibule are two in number (one on each side). They were about 1.5 to 3 cm in diameter. The duct of the gland opens in the lateral wall of the vestibule about 2.5 cm caudal to the vagina (Roberts, 1971). The occlusive lesions of the duct of Bartholin’s glands lead to formation of retention cysts and are usually mistaken for prolapse of vagina (Badmekiran et al., 2009). The present report describes a successful treatment of unilateral Bartholin’s gland cyst which caused infertility in a Holstein Friesian Crossbred cow.

Case History and Clinical Observations

A five years old Holstein Friesian crossbred cow calved two times was brought with the history of being inseminated more than 10 times naturally and artificially but not conceived. The cow calved 14 months back. The past calving history revealed that the animal had dystocia during its previous calving and a live female calf was manually delivered by a practicing veterinarian. During rectal examination, a doughy mass which fluctuates on palpation was appreciated. On clinical examination of vagina, a round enlargement (approximately 12 cm in length and 9 cm in diameter) covered with vaginal mucosa which
was attached over the left side vaginal wall was noticed (Figure 1). The swelling was soft, fluctuating, ulcerated in few places and did not elicit pain on palpation.

Treatment and Discussion

The animal was restrained with caudal epidural anesthesia by administering 5 ml of 2 per cent lignocaine hydrochloride at sacro-cocygeal space. The perineal region was washed with running tap water. The vulvar lips were everted and the mass was retracted through the vulvar lips. The protruding mass was washed with normal saline. The cyst was punctured with a sterile 18 g needle through which a thick viscid fluid came out. A small incision was made over the mass with BP blade to remove all the fluids inside the mass. The fluid was collected in a sterile glass tube to assess its nature. After surgical drainage, the base of the mass attached with vaginal wall was incised and removed (Figure 2). The small incised wound and mild bleeding was controlled by suturing the vaginal wall with catgut No.2. The incised area was swabbed with povidone iodine. The animal was clinically treated with inj. Streptopenicillin (5 gm, I/M), inj. Meloxicam (200 mg, I/M), inj. Chlorpheniramine maleate (200 mg, I/M).

The volume of fluid collected was approximately 70 ml. The fluid was clear and mucoid in nature on external appearance and no purulent/pus materials noticed. No active reproduction was found in the microbiological culture of the cyst contents. The reexamination after 20 days revealed no recurrence and the cow recovered completely.

The Bartholin’s glands secrete mucus most actively during estrus, and have a tubuloalveolar structure (Russo and Vittoria, 2006). The estrogen hormone stimulates the secretion of the vestibular glands in cows and enriches the glandular fluid with sialic acid, glycidic radicals and both neutral and sulfated mucins. The secretion of vesicular gland is considered to be critical for the survival of spermatozoa. This gland may enlarge up to 2-10 cm diameter due to obstruction and further the accumulation of fluid (Bademkiran et al., 2009)
Bartholin’s gland cysts are rare in cattle (Drivers and Peek, 2008), but are commonly encountered in human beings (Sosnik et al., 2007). The cyst can be confused with early prolapsed (Selvaraju et al., 2010), metaplasia, abscess and endometriosis (Bademkiran et al., 2009). Fathella et al. (2000) reported that trauma and extensive laceration at the time of normal/assisted calving lead to local necrotic vulvo-vaginitis and further obstruction of the duct opening. Peled et al. (2004) isolated *Brucella melitensis* during microbiological culture of the contents of cysts in both in women and cows. The reported cow has not conceived even after several inseminations because of the presence of the cyst in the birth canal. Although many causes of Bartholin gland cysts are known, it was unable to conclude the etiology for the present case. In the reported case, cow had dystocia during last parturition but no other details regarding injury to birth canal were obtained and also no microorganisms was isolated upon the culture of the fluid content of the cyst. The exploratory puncture with surgical removal and clinical treatment helped in uneventful recovery of the cow and the cow conceived during its next insemination.

References

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