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Marsupialization of unilateral Bartholin gland cyst in two crossbred cows

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Abstract
Two crossbred cows were presented with the anamnesis of unusual prolapsing mass from the vulva. Vaginal examination revealed cystic Bartholin gland. The cyst was punctured and infused with povidone iodine. Further, marsupialization was performed to prevent recurrence and the cows recovered uneventfully.

Keywords: Marsupialization, Bartholin cyst, puncture, cow

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, 1986) [5]. Bartholin gland cyst have been reported in cattle (Selvaraju *et al.*, 2010, Manokaran *et al.*, 2014, Sharma and Thakur, 2023, Ruthrakumar *et al.*, 2023, Soundararajan *et al.*, 2015) [8, 4, 9, 6, 11] and in buffalo. The occlusive lesions of the duct of Bartolin's glands lead to formation of retention cysts and are usually mistaken for prolapse of vagina (Badmekiran *et al.*, 2009) [1]. The present reports the management of Bartholin gland cyst by marsupialization in two crossbred cows.

Case History and Observations
Two crossbred cows were reported with the history of prolapsing mass from the vulva for the past six months in one cow and other for the past two months. Vaginal examination revealed a fluctuating soft tissue swelling in the lateral side of the vaginal wall in one cow (Figure 2) and eroded fluctuating swelling in the other cow (Figure 3). Further, using vaginal speculum the structure was examined (Figure 1). Based on the above observation, the cases were diagnosed to be unilateral cystic bartholin gland.

Treatment and Discussion
The cows were restrained within the trevis using 2 mL of 2% lignocaine in the first intercoccygeal space (Figure 4). The external genetalia was washed and scrubbed (Figure 5). By cystocentesis, the cystic fluid was drained (Figure 6). The volume of the fluid was varying between in 20 mL and 40 mL in both the cows. The cystic cavity was infused with povidone iodine solution (Figure 7). The collected fluid was turbid and straw yellow in colour. The cows were treated with antibiotics (Enrofloxacin 7.5 mg/kg b.wt), NSAIDS (Meloxicam 0.5 mg/kg b.wt) and antihistamines (Chlorphenaramine maleate 100mg) for three days. The cows showed recurrence after two weeks. Then the cows were decided to be managed with marsupialization. Marsupialization was a surgical procedure that involves creating a pouch to drain fluid from a cyst or abscess. A cut was made on the cyst and the fluid is drained out (Figure 8). The edges of the incised cyst were stitched with the vaginal wall using chromic catgut No. 2 in the simple continuous suture pattern. Thus, recurrence was prevented and the cows recovered uneventfully.

The cyst causes no problems at parturition nor interferes with conception as stated by Roberts (1986) [5]. However sometime, it interferes during Artificial Insemination (AI) while inserting AI gun through vagina. The vulvar lips are kept open by the cystic enlargement leads to misunderstanding by owner for prolapse, contamination of the vagina, vestibule and vulva with feces may occur. The shape of the external genitalia got distorted and a degree of vaginitis was noted associated with this defect if not treated early as stated by Sanjay Kumar (2018). Bartholin's gland cysts are rare in cattle (Drivers and Peek, 2008), but are commonly encountered in human beings (Sosnik *et al.*, 2007) [10]. The cyst can be confused with early prolapsed (Selvaraju *et al.*, 2010) [8], metaplasia, abscess and endometriosis. 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. Manokaran *et al.* (2014) [4] stated that the exploratory puncture with surgical removal and clinical treatment helped in uneventful recovery of the cow and the cow conceived during its next insemination. In the present report, the Bartholin gland cyst in two cows were marsupialized and which prevented recurrence and uneventful recovery.

Fig 1: Unilateral bartholin's gland cyst viewed using vaginal speculum

Fig 2: Unilateral bartholin's gland cyst

Fig 3: Eroded Unilateral bartholin's gland cyst

Fig 4: Epidural anesthesia in the first inter-coccygeal space

Fig 5: Washing the external genetalia

Fig 6: Bartholian's cystocentesis and drainig the cystic fluid

Fig 7: Infusing the cystic cavity with povidone iodine solution

Fig 8: Creating a slit in the cystic cavity for marsupialization

Conclusions

Bartholin gland cysts, although rare in cattle, can lead to significant complications if not addressed promptly. The present case reports highlight the successful management of unilateral Bartholin gland cysts in two crossbred cows through marsupialization, a surgical technique that effectively prevents recurrence. The cysts, often mistaken for vaginal prolapse, can cause discomfort and interfere with artificial insemination procedures. Early diagnosis and appropriate surgical intervention are crucial for ensuring the health and reproductive performance of affected animals. This study underscores the importance of recognizing and treating such conditions in veterinary practice to enhance animal welfare and productivity.

Conflict of Interest

Not available

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Reference

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