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Canine Vaginal Fold Prolapse: Incidence, Etiology, Clinical Signs, Diagnosis, and Its Management

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Canine vaginal fold prolapse is the protrusion of pear- or doughnut-shaped, edematous vaginal tissue from the vulvar cleft, predominantly during proestrus or early estrus and infrequently during late pregnancy. Licking the mass, discomfort in urination, and inability to copulate are less common presenting signs. A thorough reproductive history, vaginal cytology, and hormone test are required to diagnose this condition. Depending on the severity of the lesions and the reason for keeping the animal, treatment choices now vary from a conservative approach to surgical excision of the protruded mass and ovariectomy/ovariohysterectomy. However, recurrence is a common side effect of medical treatment; prevention is achieved by ovariectomy/ovariohysterectomy.

Keywords: Bitch, estrus, proestrus, oestrogen, vaginal fold prolapse

Vaginal fold prolapse was previously referred to as vaginal hyperplasia, vaginal prolapse, vaginal hypertrophy, oestrual hypertrophy, vaginal eversion, and vaginal protrusion. At present, the condition in bitches is more commonly referred to as vaginal fold prolapse because it is different from the condition in other animals. Edematous vaginal tissue protruding through the vulva opening due to an overreaction of the vaginal mucosa to estrogens is known as vaginal prolapse (Sontas et al., 2010; Anya et al., 2020).

Incidence

Although the precise incidence of vaginal fold prolapse in bitches is unknown, research has shown that 8–12% of occurrences occur in periparturient females, 73–86% occur in proestrus and estrus, and a small percentage occur in diestrus (Kurt et al., 2019).

Etiology

Numerous factors are believed to influence the condition, yet the precise etiology is still unknown. The predisposition may be related to the age, breed, and response to estrogenic stimulation during estrus.

- **Age:** In young bitches (typically 1.5–2.7 years old), VFP is most frequently seen during the follicular stage of the first to third oestrous cycle (Sontas et al., 2010).
- **Breed:** VFP has been frequently documented in brachycephalic breeds or crossbreeds (Feldman and Nelson, 2004). It is believed that brachycephalic breeds are genetically prone to VFP and may exhibit peri-vulvar tissue weakening, although this is not entirely confirmed.
- Prolonged straining from a difficult labor and delivery,

- Urinary tract infection, or a stoppage during coitus prior to mating,
- Physical trauma and increase in intraabdominal pressure are additional reasons for prolapse (Kurt et al., 2019).

Clinical signs

- The protrusion of the vaginal maas through the vulvar lips is a common clinical sign of vaginal prolapse (Sridevi, 2015).
- Unwillingness to breed
- Mild polyuria and dysuria
- Vaginal discharge

Based on the severity of vaginal tissue protrusion, the condition can be classified clinically into three types (Schutte, 1967; Sontas et al., 2010 & Anya et al., 2020).

- Type I prolapse is marked by a slight to moderate eversion of the vaginal floor toward the external urethral opening, which does not extend through the vulva.
- Type II prolapse is characterized by complete prolapse through the vulva of a wide, tongue-shaped or dome-shaped mass that extends from the floor of the vagina cranial to the urethral opening.
- Type III is marked by a doughnut- or ring-shaped mass that is the result of a complete prolapse of the vaginal wall over its whole circumference.

Diagnosis

- The origin, size, location of the urethral and vaginal lumen, and degree of tissue injury of the protruding mass should all be carefully examined.
- As a smooth, spherical mass with folds rising in a wide base from the floor of the vaginal vault, the mass is often soft, reducible, and associated with estrus (Sridevi, 2015).
- Vaginal neoplasia (except TVTs) is a major differential diagnosis. These tumours may be seen outside of the vulva during proestrus and estrus in older bitches (Post et al., 1991; Sontas et al., 2010).

Treatment

1. Conservative treatment

- Medical treatment is influenced by the degree of hyperplasia, mucosal injury, and whether the animal is breeding or nonbreeding.
- Prolapsed mass can be treated by reducing estrogenic stimulation or by removing the mass or both. After estrus, the prolapse mass will naturally regress in bitches that ovulated (progesterone level 2-4 ng/ml).
- A mass that protrudes from the vulva needs to be kept clean and wet. This has been managed with lubricating jelly, 50% glucose, antibiotic ointment, antibiotic/glucocorticoid combination ointment, and artificial tears.
- An Elizabethan collar is used to prevent self-mutilation. But some animals may need to be tranquilized in order to prevent self-mutilation. Diapers and protective pants are additional treatment regimens that keep tissue from being exposed to the environment (Sridevi , 2015).
- Hormone therapies: (Post et al., 1991; Sontas et al., 2010)
- ✓ Such as human chorionic gonadotrophin (HCG) (1000 IU, IM) and gonadotrophin-releasing hormone (GnRH) (2.2 mg/kg body weight, IM) have been used to shorten estrus and stimulate ovulation with varying degrees of effectiveness.
- ✓ In bitches with a history of vaginal fold prolapse, medroxy progesterone acetate has been used to treat luteal insufficiency at a dose of 0.1 mg/kg daily; perhaps this lower dosage would be a more effective option.
- ✓ However, bitches that were previously affected with vaginal fold prolapse should be treated with a short-acting progestagen, megaoestrol acetate (MA), orally for seven days during early proestrus and estrus at a dose of 2 mg/kg each day.
- ✓ Progestogens applied topically have been shown to be selective in certain situations.

2. Surgical treatment

- ❖ The surgical management of VFP in the bitch consists of (Post et al., 1991; Sontas et al., 2010):
- ✓ Mannual reduction of prolapse mass and vulvar lacing.
- ✓ Replacement of the mass, followed by surgical traction and fixation of the uterine body or horns to the abdominal wall (hysteropexy) or cervix to the abdominal muscles (cervicopexy).
- ✓ Amputation of the mass and spaying (ovariectomy and ovariohysterectomy)

Prevention

According to reports, bitches who were treated conservatively for vaginal fold prolapse had a 66% to 100% recurrence risk (Anya et al., 2020; Galal et al., 2018). Ovariohysterectomy (OHE) is the treatment of choice; regression of the prolapse mass occurs within 4–8 days following OHE (Post et al., 1991; Sontas et al., 2010 & , Sridevi, 2015).

References

1. Anya, K. O., Oguejiofor, C. F., Nnaji, T. O., & Udeani, I. J. (2020). Vaginal hyperplasia and progressive vaginal fold prolapse in a Bullmastiff bitch. *Open Journal of Veterinary Medicine*, 10(05), 55.
2. Feldman, E.C. and Nelson, R.W. (2004) Vaginal Defects, Vaginitis and Vaginal Infection. In: Canine and Feline Endocrinology and Reproduction, 3rd Edition, WB Saunders, Philadelphia, 901-918.
3. Galal, S.M., Fathi, M., Ismail, S.T., El Belely, M.S. and Mohamed, F.F. (2018) Clinical Diagnosis and Surgical Approaches of Vaginal Hyperplasia in Bitches. *Asian Pacific Journal of Reproduction*, 7, 220-224.
4. Kurt, S., Salar, S., & Baştan, A. (2019). Effect of vaginal fold prolapse occurrence in a pregnant bitch on parturition process. *Veteriner Hekimler Derneği Dergisi*, 90(1), 50-54.
5. Post, K., Van Haaften, B., & Okkens, A. C. (1991). Vaginal hyperplasia in the bitch: Literature review and commentary. *The Canadian Veterinary Journal*, 32(1), 35.
6. Schutte, A.P. (1967) Vaginal Prolapse in the Bitch. *Journal of South African Veterinary Association*, 38, 197-203.
7. Sridevi P. (2015). Canine reproduction- the theory and practice, p: 81-82.
8. Sontas, H.B., Ekici, H. And Romagnoli, S. (2010) Canine Vaginal Fold Prolapse: A Comprehensive Literature Review. *European Journal of Companion Animal Practice*, 20, 127-135.