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Short communication

True vaginal prolapse in a bitch

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Abstract

Frequently, vaginal fold prolapse is the protrusion of edematous vaginal tissue into and through the opening of the vulva occurring during proestrus and estrus stages of the sexual cycle. True vaginal prolapse may occur near parturition, as the concentration of serum progesterone declines and the concentration of serum oestrogen increases. In the bitch, this type of true vaginal prolapse is a very rare condition.

This short communication describes a 5-year-old female, cross-breed dog in moderate condition, weighing 33 kg, with distocia and true vaginal prolapse. Abdominal palpation and transabdominal ultrasonography revealed live and dead foetuses in the uterine horns. One dead and four live fetuses were removed from uterus by cesarean section. The ovariohysterectomy was performed after repositioning the vaginal wall with a combination of traction from within the abdomen and external manipulation through the vulva. Re-occurrence of a vaginal prolapse was not observed and the bitch recovered completely after the surgical therapy.

Compared to other vaginal disorders, vaginal prolapse is an uncommon condition in the bitch. In the present case, extreme tenesmus arising from distocia may have predisposed to the vaginal prolapse. The cause of dystocia was probably the disposition of the first foetus. We concluded that the vaginal prolapse was the result of dystocia in the present case.
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Keywords: Vaginal prolapse; Dystocia; Bitch

1. Introduction

The commonest causes of vaginal/vestibular masses in the bitch are vaginal prolapse, vaginal neoplasia, and urethral neoplasia protruding into the vaginal vault (Manothaiudom and Johnston,

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1991). Frequently, vaginal fold prolapse is the protrusion of edematous vaginal tissue into and through the opening of the vulva occurring during proestrus and estrus stages of the sexual cycle. Oedematous swelling of the vaginal mucosa may develop under the influence of estrogen (Johnston et al., 2001). Vaginal prolapse can be caused by vaginal tumours (Williams et al., 2005) or trauma (Arbeiter and Bucher, 1994) but this is fairly rare. This condition has been referred to traditionally as vaginal hyperplasia and vaginal prolapse. However, because it is not true prolapse and hyperplasia and, since the tissue involved is extremely oedematous, it is better to use the term vaginal fold prolapse (Purswell, 2000). True vaginal prolapse may occur near parturition, as the concentration of serum progesterone declines and the concentration of serum oestrogen increases (Johnston et al., 2001; Konig et al., 2004; Rani et al., 2004). Vaginal prolapse occurs less commonly in dioestrus, and normal pregnancy (Johnston et al., 2001; Okkens, 2001). The cervix is exteriorized in cases of complete vaginal prolapse but not with partial prolapse (Wykes, 1986). In the bitch, this type of true vaginal prolapse is a very rare condition (Okkens, 2001). Brachycephalic breeds appear predisposed to vaginal fold prolapse and may possess a hereditary weakness of the perivulvar tissue (Wykes, 1986). Constipation, forced separation during coitus and size discrepancy between breeding animals may contribute to the development of true vaginal prolapse (Purswell, 2000).

2. Materials and methods

This short communication describes a 5-year-old female, cross-breed dog in moderate condition, weighing 33 kg, with distocia and true vaginal prolapse (Fig. 1). The bitch was referred to the Obstetrics and Gynecology Clinics of the University of Yuzuncu Yil. The owner stated that the condition occurred 1 min after delivery of a dead foetus the previous day. The initially strong and prolonged abdominal contractions ceased completely after vaginal prolapse. The owner stated that the mass was more enlarged after prolapse. The bitch had delivered successfully three previous times without either dystocia or vaginal prolapse, and did not have a vaginal fold prolapse during any previous proestrus or oestrus periods.

Upon referral, rectal temperature, heart rate, and respiratory rate were within normal limits. During the examination of protruding mass, a 5-cm long laceration on the labia of the vulva and local necrosis on the surface of the vagina were observed (Fig. 2). The laceration on the vulva involved the skin and deeper tissue layers from the vestibular lumen extending nearly to the anus, and was reported by the owner to have occurred after vaginal prolapse. The everted tissue was discoloured and oedematous. Abdominal palpation and transabdominal ultrasonography revealed live and dead foetuses in the uterine horns. A nonechogenic, fluid-filled and bladder-like body was observed during the ultrasonography of the prolapsed mass.

For surgical treatment, the bitch was premedicated with atropine sulfate (0.04 mg/kg, s.c.) and xylazine hydrochloride (2 mg/kg, i.m.). General anaesthesia was induced using ketamine hydrochloride (10 mg/kg, i.m.). One dead and four live foetuses were removed from uterus by caesarean section. Herniation of the corpus uteri and urine bladder was identified within the prolapsed vagina. The everted tissue was cleansed prior to reduction. The ovariohysterectomy was performed after repositioning the vaginal wall with a combination of traction from within the abdomen and external manipulation through the vulva. In addition, ovaries were inspected and number of luteal bodies estimated. The left ovary contained four apparently normal CL and the right ovary two CL. There was no oestrogen-producing structure on the ovaries. The laceration of vulvar labia was sutured. Re-occurrence of a vaginal prolapse was not observed and the bitch recovered completely after the surgical therapy. All foetuses that were delivered by caeserean



Fig. 1. The vaginal prolapse in the bitch.



Fig. 2. The vulvar laceration.

section appeared to be full-term with good hair cover and four puppies are still living with their mother.

3. Results and discussion

Vaginal prolapse has been reported in virtually all domestic species (McNamara et al., 1997). Compared to other vaginal disorders, vaginal prolapse is an uncommon condition in the bitch. If a true prolapse occurs in the bitch, other organs, such as the bladder, and the uterine body and/or distal part of the colon, may be present in the prolapse (Wykes, 1986). In the present study, the bladder and the corpus uteri were present in the prolapsed vagina. The more enlarged mass after the prolapse supports our opinion that failure of venous circulation and inflammation may cause oedema of the prolapsed vagina. The laceration on the labia of the vulva occurred as the result of excessive pressure of the mass on the inner surface of the vulva.

Memon et al. (1993) reported that vaginal fold prolapses occur primarily during proestrus or early oestrous stages of the cycle. However, true vaginal prolapse mainly occurs during parturition or shortly after (Okkens, 2001). Excess ante-partum relaxation of pelvic tissues and increased intra-abdominal pressure may be the aetiology of pre-partum prolapse (Markandeya et al., 2004). In the present case, extreme tenesmus arising from distocia may have predisposed to the vaginal prolapse. The cause of dystocia was probably the disposition of the first foetus. In this case, the parturition process could have been ended by narrowing of the birth canal due to vaginal prolapse and/or uterine inertia. We concluded that the vaginal prolapse was the result of dystocia in the present case.

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