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Therapeutic management of cervico-vaginal prolapse in a bitch

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Abstract

A mongrel bitch was presented to the Teaching Veterinary Clinical Complex with the history of cervico-vaginal prolapse from the last one week. On clinical examination it was observed that the vagina, its folds and anterior portion of cervix protruded outside which become edematous and hyperaemic, without the involvement of urinary bladder. As per owner version, the bitch has not urinated since last evening and straining was observed during defecation. After catheterization approximately 50 ml of urine was drained out from urinary bladder. The case was treated by applying bilateral pressure with the help of fingers and the prolapsed mass could be reposed. Modified Buhner's sutures were then applied to prevent its reoccurrence. Animal was kept on mineral supplements, laxative and LH analogue as a therapeutic management. The suture was removed after three days of treatment. In a result, the bitch was recovered uneventfully within one week.

Keywords: Bitch, cervico-vaginal prolapse, therapeutic management

Introduction

Cervico-vaginal prolapse is rare condition in bitch when compared to other vaginal pathologies like vaginal tumors or urethral tumors which protrude into vagina and obstruct the canal [1]. Vaginal prolapse usually occur in young bitch preferably less than 2 to 3 years age [2]. It can be associated with the whelping during prolonged labor or upto 48 h after parturition [3] which may be due to excessive relaxation and stretching of pelvic musculature [4], severe tenesmus and uterine disease, rough handling during parturition, genetic predisposition and aberrant connective tissue (CT) metabolism [5]. Majority of incidence was observed near parturition, as the serum progesterone concentration declines and the serum estrogen concentration increases near to whelping [6]. The incidence is less during diestrus, anestrus and normal pregnancy [7]. During prolapsed there may be edematous swelling of the vaginal mucosa which is accompanied by increased vaginal hyperemia and edema due to high serum estrogen levels [8] during proestrus and estrus [9]. As strengthening of high serum estrogenic response can lead to disproportionate mucosal folding of the vaginal floor just cranial to the opening of urethra, which ultimately results in protrusion of vaginal mucosa from the vulva [2]. In long standing cases, the protruded mucosa can eventually become necrosed, inflamed and can easily be ruptured [10].

Case History and Clinical Observation

A two year old mongrel bitch with prolapsed mass (red in colour) was presented to the Teaching Veterinary Clinical Complex, College of Veterinary Sciences & A.H., Central Agricultural University, Selesih, Aizawl, Mizoram. Owner reported that about one week ago the bitch was whelped with two pups. Physical parameters show a slight variation as compared to normal like sub normal rectal temperature (99.2 °F), increased heart rate (110 bpm). After carefully examining the mass it indicates the prolapse of vagina and its folds without the involvement of urinary bladder. Visual observations, palpation of protruded mass and catheterization of urinary bladder revealed that it was a case of CVP (Fig. 1). There was some discoloration indicative of local hemorrhages and necrosis due to rupture of blood vessels. The bitch was showing moderate rectal and vaginal straining.

Treatment

The area of vulva was cleaned with KMNO₄ (1:10,000) and immediately after cleaning, ice pack was applied to reduce the prolapsed mass.

To empty the urinary bladder, catheterization was done and 50 ml of urine was drained out. The prolapsed mass was cleaned specially the dead necrosed tissues and washed extensively with mild Potassium Permanganate solution (0.1% KMnO₄ Solution). To reduce the mass size cold water was applied over the mass. To lubricate and desensitized the mass, Lignocaine jelly and ointment Soframycin was applied. The pressure was applied bilateral with the help of fingers from the ventral floor and lateral sides to repose the mass into the body [2]. With the continuous squeezing and applying bilateral pressure it was able to reduce the size and repose the mass. A modified Buhner suture were applied on the external labia keeping an opening of one finger diameter for the urination [2]. Bitch was treated with Ceftriaxone 500 mg o.d I/M for 3 days, Meloxicam 2ml o.d I/M, Calcium 2ml o.d I/M, Chlorpheniramine Meleate 2ml o.d I/M at state along with laxative, calcium syrup and multi vitamins for 10 days and lastly LH analogue @ 500 I.U. by I/M route. The purpose of giving LH analogue was to luteinize the growing follicles and indirectly decrease the estrogen concentration which reduces the risk of prolapsed [2]. Sutures were removed after three days and the bitch showed a speedy recovery.

Discussion

Cervico-vaginal prolapse mainly occur during proestrus or early estrus stages of the cycle [6] and during or shortly after parturition [7]. Increased abdominal pressure and excessive pelvic ligaments relaxation predispose the animal for postpartum prolapse [8]. Constipation, forced separation during mating and size incompatibility between breeding animals can also lead to true vaginal prolapse [11, 12]. Reports suggests that this condition may have some hereditary predisposition and is been seen in pure bred dogs [6]. Vaginal prolapsed usually occur during high serum estrogen concentration and is also connected with weakness of the perivulvar tissue of the bitch. The deficiency of calcium and phosphorus and the increasing intra-abdominal pressure during parturition along with excessive relaxation of pelvic ligaments and vaginal muscles are also considered to be the cause of the prolapsed [13, 14]. At this stage the genital organs become atonic and there are more chances of prolapse. Based on information obtained from the present study the bitch was whelped one month ago and the mother is in lactating, so there might be deficiency of calcium and phosphorus.



Fig 1: Cervico-vaginal prolapse in a bitch **A.** Before treatment **B.** During treatment **C.** After treatment

Conclusion

Cervico-vaginal prolapse is a rare condition in bitch. The present case of cervico-vaginal prolapse can be treated by

taking corrective gynecological interventions and by giving supportive treatment.

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