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POSTPARTUM UTERINE PROLAPSE IN A BITCH – CASE REPORT

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ABSTRACT

A 2-year old postpartum bitch was presented to Multidisciplinary Veterinary Clinic 'Bulgaria', Sofia with symptoms of shock and a complete bicornuate prolapse of the uterus. Measures to correct the shock were taken, while the uterine tissue was disinfected with an isotonic solution. After the patient was hemodynamically stable, an ovariohysterectomy was performed, followed by cervicopexy. The patient's postoperative recovery involved temporary urinary retention due to swelling of soft tissues, which was managed with a foley catheter two days. Antibiotic, antiinflammatory treatment and pain reaction monitoring after the surgery were performed. The patient status was followed daily and full recovery was registered after a week.

Key words: bitch, postpartum uterine prolapse, treatment.

Introduction

Uterine prolapse is a caudal extrusion of the uterus through the cervix into the vaginal canal, and in severe cases, out of the vaginal opening. Most cases involve only one of the uterine horns, although cases where both are involved have been (Anderhurst SR *et al.*, 1975), as well as in this report.

Prolapse of the uterus occurs seldom in bitches and queens (Maxson FB et. al. 1969), and is a condition that, for the rare cases it does, develops during or after partuition, and has been reported in those, delivering a large litter or ones, experiencing dystocia.

There is no exact etiology to this condition. Caudal dislocation of the uterus may be caused by trauma associated with forceful fetal extraction, dystocia, increased motility during or right after partuition as well as excessive straining during delivery (Anderhust SR, 1975; Miesner DM et. al., 2008). Another reason may be anomalies in the branching tissue structures between the placenta and the uterine wall, leading to incomplete separation between the two.

For the prolapse to occur, certain conditions must be present, such as the cervix being dilated, the suspensory ligaments being stretched (Latha C *et al.*, 2014) or even ruptured and the myometrial tone to be decreased in order for the uterus to pass through the cervical canal and into the vagina.

The choice of treatment depends on many factors, such as the condition of the prolapsed organ and the wishes of the owner – whether he intends to use the animal for breeding purposes in the future or not. The conservative approach of replacement of the uterus should only be attempted if the organ appears viable (Miesner DM *et al.*, 2008). Debridement of the exposed tissue is necessary before any attempt of reducing the prolapse is made. Use of hypertonic solution and application of osmotic agents on the prolapsed tissue has been described in literature (Jadhao A. *et al.*, 2020; Feldman EC *et al.*, 2004). When the prolapsed uterine tissue is not viable, the recommended choice of treatment is surgical – an ovariohysterectomy, particularly when one or both uterine horns are fully everted (Payan-Carreira *et al.*, 2012).

Case description

This case report describes the caudal uterine dislocation of both the uterine horns and uterine body in a 2-year old mix breed female dog (Fig. 1, 2). The patient was presented to the clinic in

shock, with low body temperature of 36,1°C and with a history of a recent parturition, most likely in the previous 24 hours.

Laboratory and physical examination: Hematologic profile revealed moderate anemia and a low platelet count. Later, after admission, vomiting of parts of placenta and newborn remains were observed. The prolapsed tissue appeared to be engorged with venous stasis and ulcerations, and both of the uterine horns and body appeared to be involved.

Discussion

The moderate anemia and a low platelet count were corrected by 400ml blood transfusion and fluids. While measures were taken for correction of the shock, the prolapsed tissue was superficially cleansed with a mild solution of 9 parts sterile saline to one part 1% povidone-iodine. One of the ulcerations on one of the horns, which appeared to be deeper, was sutured with a 4-0 PDS suture.

Figures 1 and 2: Postpartum uterine prolapse, involving both uterine horns and the body. Placental sites are visible.

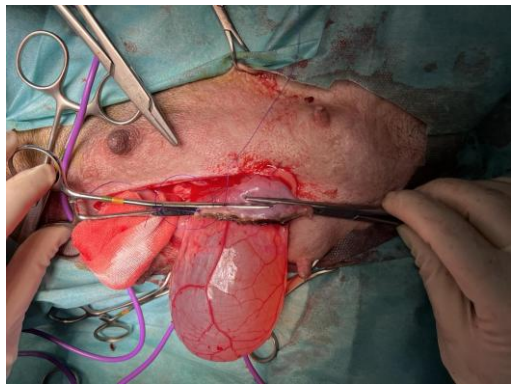

Figure 3: Suturing of the uterine stump.

After stabilising the patient, a total ovariohysterectomy with general anesthesia was performed (Fig. 3). The anesthetic plan included sedation with Midazolam (0.3 mg/kg/i.v.) and Ketamine HCl (6 mg/kg/i.v.), induction with propofol (6 mg/kg/i.v.) and isoflurane. After the ovariohysterectomy, the cervical stump was pexied to the abdominal wall, ensuring that another prolapse of tissue would not be possible. In cases where replacement of the tissue without ovariohysterectomy is attempted, performing a uteropexy has shown to be effective in prevention of another prolapse.

The postoperative period revealed urine retention, due to inflammation and swelling of the soft tissues around the urethra. A foley catheter was placed and the patient was left for observation for the next two days, after which a urethro- and cystoscopy was performed. The procedure yielded no new findings, normal urination was possible. Postoperative treatment included Ceftriaxone 30 mg/kg/8h, Meloxicam 0.1 mg/kg/24h, pain management included a constant rate infusion of Fentanyl (2mcg/kg/h), Lidocaine (1mg/kg/h) and Ketamine HCl (0.3/mg/kg/h) for the first 10 hours after the surgery, followed by Methadone 0.2mg/kg/8h, dose was then titrated to administration of 0.1 mg/kg every 12 hours for three days. High fluid rates were appointed for shock and dehydration correction before and during surgery, after the patient was hemodynamically stable, they were corrected to supporting rates.

Six days after admission and surgery, intravenous treatment was discontinued and Synulox (17.5 mg/kg/24h) and Analgin (30 mg/kg/12h) were prescribed for the next couple of days.

On the 10th day the patient had reached full recovery and was discharged.

In the author's experience, the prognosis on cases like this one is guarded, since secondary complications are numerous and the possibility of their occurrence depends on the state of the patient, the timing of the procedure as well as recognition of their symptoms. Complications may be the following – discomfort and pain, repeat prolapse of tissue and hypoperfusion followed by necrosis, involvement of abdominal viscera into the prolapse, most commonly the urinary bladder. This shows the importance of palpation or performing an ultrasound exam of the prolapsed tissue before replacement or OHE is attempted. Failure to manage these symptoms may result in signs of toxemia and shock or other complications.

In conclusion, all aforementioned information could be of benefit in the small animal clinical practice and treatment of the postpartum canine diseases.

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