

## CASE REPORT

# Management of Unilateral Uterine Horn Prolapse in a Full-term Pregnant Great Dane Bitch

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Uterine prolapse, the eversion of the uterine body through the dilated cervix via the vagina, is manifested by a hanging tubular mass out of the vulva. It is an uncommon complication of peripartum or postpartum bitches, usually occurs within 48 hours of whelping and involves one or both uterine horns with distinctly visible prolapsed uterine horn bifurcation outside the vulva (Sathiamoorthy *et al.*, 2013; Battaglia and Steele, 2015). The present communication reports the successful management of peripartum unilateral uterine prolapse in a Great dane bitch by manual reduction and reposition.

### CASE HISTORY AND CLINICAL OBSERVATIONS

A full-term pregnant three-year-old Great dane bitch was presented to Small Animal Gynaecology and Obstetrical Unit, Madras Veterinary College Teaching Hospital, Chennai-600 007 with the history of severe straining and sudden protrusion of tubular mass from the vulva since 36 hours. The bitch had not yet given birth to a single puppy following severe straining since last morning but has ended up in the protrusion of uterine horn with a dead fetus hanging from the everted mass (Figure 1).

Clinical examination revealed normal vital parameters and prolapsed mass from one uterine horn devoid of tear, lacerations, and necrosis. The everted uterine horn was slightly edematous and highly congested. Radiography revealed no retained fetus (es) in the abdominal cavity and pelvic passage. Based on clinical examination, the case was diagnosed as unilateral uterine horn prolapse. Since it was a fresh case with dirt-free moist prolapsed mass, manual reduction followed by repositioning opted as an obstetrical approach in the management of the case.

### TREATMENT AND DISCUSSION

The bitch was premedicated with Atropine sulfate (TROPINE<sup>®</sup>) at 0.04 mg/kg, IM and Xylazine (Xylaxin<sup>®</sup>) at 1 mg/kg, IM followed by maintenance under general anesthesia using propofol at 2.5 mg/kg. After careful removal of the dead fetus from the prolapsed mass, the mass was cleaned well with normal saline and lignocaine jelly (LOX<sup>®</sup> - 2% Jelly) was

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applied all over the mass to alleviate pain and swelling; lubricated well with K-Y jelly and Metronidazole ointment was applied as an antibacterial measure. Repositioning of the prolapsed mass using gloved hands was attempted, but the difficulty was faced in placing the tubular mass back into the abdominal cavity because of narrow vulvar opening and slightly edematous prolapsed mass. Hence episiotomy



**Figure 1:** Unilaterally prolapsed uterine horn with a dead fetus

was done with bilateral incisions at 10'o clock and 2'o clock positions on the vulval lips. The lubricated prolapsed mass was then repositioned aseptically into the abdominal cavity by applying mild pressure, closing vulvar incisions in a simple interrupted pattern using PGA-2 (absorbable suture) and vaginal douching with 100 mL of Normal saline. Modified Buhner's sutures using silk as suture material were then applied to prevent the reoccurrence of prolapse. The bitch was treated with intravenous fluid therapy (Inj. RL 300 mL and Inj. DNS 200 mL), antibiotics [Inj. Cefotaxime (VP-TAX<sup>®</sup>) at 20 mg/kg, IM], antihistamine [Inj. Chlorpheniramine maleate (ANISTAMIN<sup>®</sup>) at 1 mg/kg, IM] and anti-inflammatory [Inj. Meloxicam (MELONEX<sup>®</sup>) at 0.2 mg/kg, IM] drugs along with Oxytocin at 1 IU/kg. The animal was also put under oral medications with Tab. Cefotaxime (Claforan<sup>®</sup>) at 20 mg/kg, BID for 7 days and Tab. Carprofen (CARODYL<sup>®</sup>) at 4 mg/kg, SID for 3 days. Buhner's sutures were removed after 7 days. Post-treatment follow up on days 8 and 16 revealed no signs of recurrent prolapse, which was substantiated with X-ray and ultrasonography to rule out any uterine involvement. The bitch recovered uneventfully.

In spite of being a rare postpartum complication, uterine prolapse in bitches commonly results from persistent straining, faulty obstetrical procedures, inappropriate oxytocin usage, and forceful traction exerted at the time of whelping. Other possible reasons for uterine prolapse in a bitch include the large-sized fetus, atony of uterine muscles, vigorous abdominal contractions, loosening of uterine ligaments, and prolonged dystocia. The typical clinical manifestation of uterine prolapse is the protruded tubular uterine mass outside the vulva, which is usually accompanied by severe tenesmus, abdominal pain, and bleeding of everted mass on self-mutilation by the bitch. In rare cases, these clinical signs may progress to toxemia and shock. A uterine prolapse should be differentiated from vaginal prolapse, hyperplasia and neoplasms using digital manipulation, vaginoscopy, radiography, and ultrasonography (Doshani *et al.*, 2007; Ali *et al.*, 2018; Singh *et al.*, 2019).

The choice of uterine prolapse treatment usually depends on the protruded mass outside the vulva and the future breeding life of bitch. In earlier reported cases, manual reduction of the prolapse following lubrication can be made as followed in the present case. To prevent recurrence, a manual reduction can be substantiated with Modified Buhner's sutures or vulval purse-string sutures or horizontal mattress suture involving the vulval lips as usually done in case of vaginal or cervicovaginal prolapse in dogs (Singla *et al.*, 2016; Ahuja *et al.*, 2017; Basera *et al.*, 2020). An episiotomy can also be performed to assist with manual reduction of the prolapsed uterine tissue. If any rupture is noted at the time of clinical examination of everted uterine mass, then surgical suturing of the ruptured site and checking it for any hemorrhage is mandatory before repositioning the mass into the abdominal cavity. Following manual reduction, fluid therapy with

antibiotics, antihistamines, anti-inflammatory drugs is required for maintaining the general health status of the dam, along with oxytocin administration to promote uterine involution and to prevent recurrence (Jadhao *et al.*, 2020).

In long-standing stages of uterine prolapse, the everted uterine mass may either become dry, lacerated, contaminated, and necrosed, eliminating the chances of manual reduction. In such cases and in cases with severe rupture and/or hemorrhage, ovariohysterectomy (OHE), as reported by Payan-Carreira *et al.* (2012), can be performed by removing the entire uterine tissue to avoid any ascending infection into the peritoneal cavity. Hence surgical approach involving OHE is the most suitable therapeutic approach for cases involving complete eversion of one or both uterine horns. Some cases may experience postoperative complications like hemorrhage, shock, infection, peritonitis, and urethral obstruction or necrosis (Aronson, 2015).

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