



ISSN: 2456-2912

VET 2024; 9(1): 28-29

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www.veterinarypaper.com

Received: 25-11-2023

Accepted: 30-12-2023

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Navigating uterine rupture challenges in a non-descriptive female dog

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Abstract

A three-year-old female Non descriptive dog was brought with a history of delivered a dead puppy with greenish vaginal discharge. On clinical examination one pup head was able to palpated with amniotic membrane. The case was diagnosed with Secondary uterine inertia and induction were attempted and managed with caesarean operation. During laprotomy uterine rupture was identified and corrected with Ovariohysterectomy.

Keywords: Uterine rupture, uterine inertia and ovariohysterectomy

1. Introduction

Dystocia or difficult birth, can occur in female dogs for various reasons and uterine rupture is one among the more severe and life-threatening causes. Uterine rupture is a rare but serious condition where the muscular wall of the uterus tears during labour. Dystocia is more common in dogs due to the existence of large litter sizes. It also variable among different breeds of dog. (Erin Runcan 2019) ^[1]. To prevent neonatal loss breeder prefers caesarean section. The causes of dystocia are due to fetal or maternal factors. The most common causes for dystocia in all female dogs is primary uterine inertia. Which is due to low level of circulating oxytocin, higher progesterone, lower calcium level and certain genetic factors. Canine distemper virus can cause abortion or pregnancy loss in dogs (Verstegen *et al.*, 2008) ^[2]. However, the incidence of uterine rupture in canine is unknown (Kacprzak *et al.*, 2014) ^[3].

2. Case report

A three-year-old female Non descriptive dog was brought to the Veterinary Clinical Complex, Veterinary College and Research Institute Theni with history of delivered on dead male pup and no progress further even after 4 hours. On clinical examination all the vital parameters were within the normal range and the dog had a constant head tilt and temporal twitch. The dog has not been vaccinated. On vaginal examination one pup head was able to palpated with amniotic membrane hence induction was initiated with injection calcium gluconate 5 ml slow I/V and 10 IU of injection oxytocin in 100 ml of dextrose 20 per cent. Every 30 minutes vaginal stimulation was attempted for about 2 hours however there was no progress, Hence it was decided to carry out caesarean section. The surgical site was prepared aseptically caesarean section was initiated under Injection Atropine @ 0.02mg/kg BW I/M with Injection Xyalaine @ 1.1 mg/Kg BW I/M as a premedication with Injection ketamine @5mg mg/Kg BW and Injection diazepam 0.5mg mg/Kg BW I/V as an induction and maintained with 2% Isoflurane in 200 ml of oxygen. Mid ventral laprotomy was made and examination of the gravid uterus revealed uneven rapture on the left horn (Fig1). Two female pups were relived among which one pup was live and one was dead. The abdominal cavity was lavage with normal saline and metronidazole. Due to the extensive rupture in the uterine wall, it was decided to perform ovariohysterectomy. Post-operative antibiotic along with sutured wound were taken care for seven days the sutures were removed on the seventh day and the animal recovered uneventfully.

3. Discussion

Dystocia is an emergency situation need to be addressed immediately in dogs with incidence about five per cent (Bergström *et al.*, 2006) [4]. In certain cases, uterine torsion was observed along with uterine rupture as a cause of dystocia in pregnant dogs (Jayanthi *et al.*, 2018, and Kodie *et al.*, 2020) [5, 6]. This present report describes the uterine rupture in a dog in which per vaginal delivery was not possible. In some cases forceful obstetrical technique were suggested as a potential cause of canine uterine rupture in textbooks, no cases of manual intervention during whelping associated with uterine rupture in dogs have been reported (Humm *et al.*, 2010) [7]. Peritoneal lavage is more important in uterine rupture which will prevent the risk of adhesion, further infection and sepsis (Kirby 2003) [8]. Overdose of oxytocin causes uterine rupture leads to foetal injury or death (Plumb 2005) [9]. The consequence of uterine rupture leads to release of endotoxins and inflammatory mediators in circulatory system leads to multiple organ failure (Kacprzak *et al.*, 2014) [3]. In some case, uterine torsion might have caused obstruction of blood supply to the uterus, which leads to rupture of uterine vessels, congestion, shock that causes maternal death (Jayanthi *et al.*, 2018) [5]. In the present case the early surgical intervention could have saved the life of both fetus and mother and peritoneal lavage performed might also reduce the further infection or peritonitis. Hence the dog recovered eventually.



Fig 1: The arrow mark indicates rupture on the left horn and intact amniotic sac protruding out

4. Conclusion

Uterine rupture in a three-year-old female Non descriptive dog was managed with ovariohysterectomy and delivered with a live pup without life threatening to the dam such as peritonitis and reported.

5. Acknowledgment

The authors thank The Dean, Veterinary College and Research Institute Theni, Tamil Nadu for the facilities provided.

6. References

1. Runcan E. Diagnostic imaging: An essential tool in the successful management of canine dystocia. *Vet Record*; c2019.

2. Verstegen J, Dhaliwal G, Verstegen-Onclin K. Canine and feline pregnancy loss due to viral and non-infectious causes: A review. *Theriogenology*. 2008;70(3):304-319.
3. Kacprzak KJ, Jurka P, Max A, Czerniawska-Piatkowska E, Bartyzel BJ. Etiology, symptoms and treatment of uterine torsion in domestic animals. *Folia Pomer. Univ. Technol. Stetin., Agric., Aliment, Pisc., Zootech*. 2014;315(32):21-30.
4. Bergström A, Nødtvedt A, Lagerstedt AS, Egenvall A. Incidence and breed predilection for dystocia and risk factors for cesarean section in a Swedish population of insured dogs. *Vet Surg*. 2006;35(8):786-91.
5. Jayanthi NR, Saahithya LJ, Harish Rao GVS. Unilateral uterine torsion and rupture in a Labrador: A path morphological report. *Int. J Curr Microbiol Appl Sci*. 2018;7(7):1063-1068.
6. Kodie DO, Oguntoye CO, Oyetayo NS, Eyarefe OD. Unilateral uterine torsion with a near-complete rip of the affected right horn in a parturient German shepherd bitch. *Sokoto Journal of Veterinary Sciences*. 2020;18(2):108-113.
7. Humm KR, Adamantos SE, Benigni L, Chan AEA, Brockman DJ, Chan DL. Uterine rupture and septic peritonitis following dystocia and assisted delivery in a great Dane bitch. *Journal of the American Animal Hospital Association*. 2010;46:353-357.
8. Kirby BM. Peritoneum and peritoneal cavity. In: Slatter D, Ed. *Textbook of Small Animal Surgery*. 3rd ed. Philadelphia: Saunders; c2003. p. 414-445.
9. Plumb DC. Oxytocin. In: *Plumb's Veterinary Drug Handbook*. 5th Ed. Stockholm, WI: Pharma Vet Inc; c2005. p. 849-853.