

CASE REPORT

A Successful Management of Canine Dystocia by Elective C-Section: A Case Report

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HOW TO CITE THIS ARTICLE:

Nikita Singh, Nikhil Sachan, Rajesh Kumar et. al, A Successful Management of Canine Dystocia by Elective C-Section: A Case Report. Journal of Animal Feed Science and Technology. 2025; 13(1): 27-29.

ABSTRACT

A 2-year-old pregnant Labrador bitch in second parity was presented to Veterinary Clinical Complex, A.N.D.U.A.T. Kumarganj, Ayodhya, with a history of complete gestation lasting 64 days. The dog exhibited anorexia and straining since 24 hours, yet unable to deliver foetuses. On clinical examination, the rectal temperature was 102°F. The vital parameters such as pulse rate, heart rate, and respiration rate were slightly elevated. The conjunctival mucous membrane colour appeared normal and pinkish. Per vaginal examination revealed a dilated cervix, and radiographic examination confirmed the presence of more than 5 foetuses. Considering the condition, a prompt decision was made to perform elective caesarean section (C section). Following C section, 9 live pups were delivered. The outcome highlights the importance of quick and precise decisions in critical situations to save the life of foetus and bitch.

KEYWORDS

• Bitch • Caesarean section • Dystocia

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➤ Received: 26-04-2025 ➤ Accepted: 06-06-2025



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INTRODUCTION

The caesarean section (C-section) is a routine procedure in bitches to avoid parturient complications and subsequent foetal mortality (Stolla et al., 1999). Carefully scheduled elective caesarean sections are deemed safe, efficient, and defensible for high-risk pregnancies (Linde-Forsberg and Eneroth, 2000). The incidence of canine dystocia ranged from 3.7 to 5% (Bergstrom et al., 2006; O'Neill et al., 2017). Neonatal mortality rates following normal delivery are reported to range from 9 to 26% (Davidson, 2014). While, during complicated whelping the neonatal mortality may increase up to 30-40% (Mosier, 1986). Approximately 60-80% of all dystocia cases require surgical intervention and about 58% of C-section are performed on an emergency basis (Moon *et al.*, 1998) which poses risks for both maternal and foetal survival. Additionally, the rate of stillbirth is higher in emergency condition, emphasizing the need for timely intervention during parturition. Hence, properly timed elective c sections could be a valuable approach, particularly in managing whelping, with an objective of minimizing neonatal mortality rates.

HISTORY AND CLINICAL EXAMINATIONS

A multi-parous pregnant Labrador bitch, aged 4 years and weighing 48 kg, brought to the Veterinary Clinic Complex with a complaint of anorexia and straining since 24h. The bitch was unable to deliver any foetuses despite full straining efforts. The gestation period of 64 days was complete. Clinical examination revealed vaginal discharge without foul smell. During abdominal palpation, foetal parts were felt within the abdominal cavity. Abdominal radiograph revealed more than 5 foetuses. Trans-vaginal palpation was conducted with adequate lubrication, revealed an open cervix. The vital parameters like rectal temperature (102°F), respiration rate (32/minute), pulse rate (91/minute), and heart rate (84/minute) was slightly increased.

DIAGNOSIS AND TREATMENT

As the case was delayed one, to save the life of litters, an immediate C section was performed. The surgical site was aseptically prepared. The lower mid-ventral site was selected as the surgical site. The C-section procedure

was performed in dorsal recumbency under general anaesthesia, using atropine-sulphate as a pre-anaesthetic (0.04 mg/kg bw, IM). Thirty minutes later, a combination of xylazine and ketamine in a 1:1 ratio was administered (1ml/10kg, bw, IV). As a pre-operative antibiotic, ceftriaxone (25 mg/kg, bw, IM) was administered to minimize the risk of infection during surgery. Along the Linea alba, caudal to the umbilicus about 8 cm incision was made and the gravid uterine horn with uterine body was carefully lifted out of the abdomen. The ventral side of the uterine body was incised without damaging major blood vessels or the foetus. The incision was extended as needed to avoid damage during the extraction of the neonate. The foetus was gently squeezed and carefully extracted out one by one from the uterus (Fig. 1).



Fig. 1: Photograph showing part of fetus and incised uterus

Once the fetus was delivered, the umbilical cord was clamped with forceps, and a ligation suture was applied to control bleeding before incising and removing the cord. After birth, the newborn litters were kept in the warmertomaintain their body temperature. The practice ensured their comfort and prevents hypothermia. After delivering 9 foetuses, the uterus was lavaged using normal saline solution (NSS) and metronidazole to remove uterine debris and blood clots. The uterus was closed with Cushing and Lambert suture pattern using 2-0 absorbable suture material. The subcutaneous layer was then sutured using 1-0 No. absorbable material.

The skin layer was closed using interrupted horizontal cross mattress with 1-0 No. non-absorbable suture material. Antiseptic dressing was done by povidone iodine ointment. After the surgery, the post-operative care was done using ceftriaxone, 25 mg/kg bw, im; meloxicam, 0.2 mg/kg, bw; B-complex, 2ml, im for 5 days. Regular antiseptic dressing ensured proper surgical wound management. The case was recovered uneventfully.

In general, a case of canine dystocia is always an emergency, should be attempted without undue delay. In present case, the radiography examination confirmed the presence of more than five fetuses within the abdominal cavity. It was more imperative to proceed for elective C section rather than opting pharmacological induction of parturition. On one hand, pharmacological induction of parturition might compromises the vitality of fetus in due to time lapse; whereas on the other hand, surgical intervention become inevitable to save the life of dam and fetus in case of non-delivery single fetus.

CONCLUSION

In conclusion, canine dystocia is always an emergency situation, the timely appropriate interventions could save life of fetus and dam.

Conflict of Interest: None

REFERENCES

1. Bennett, D. (1974). Canine dystocia-a review of the literature. *J. Small Anim. Pract.*, 15: 101-117.
2. Bergstrom A., Nodtvedt A., Lagerstedt A.S. and Egenvall A. (2006) Incidence and breed predilection for dystocia and risk factors for cesarean section in a Swedish population of insured dogs. *Veterinary Surgery*, 35, 786-791.
3. Davidson, A.P. (2014). Neonatal Resuscitation-Improving the outcome. *Vet. Med. Small Anim. Clin.*, 44: 191-204.
4. De Cramer, K. G. M. (2017). Preparturient caesarean section in the bitch: Justification timing execution and outcome. PhD. Pretoria, South Africa: University of Pretoria.
5. Feldman (Eds.), Textbook of veterinary internal medicine, (Vol. 6, pp. 1655-1677). Philadelphia, PA: Saunders.
6. Jayakumar, C., Krishnaswamy, A., Sudha, G., and Honnappa, T. G. (2013). Planned Cesarean Section and other obstetrical interventions in dogs: A comparative evaluation based on neonatal survival. *Indian Journal of Canine Practice*, 5: 136-141.
7. Johnson, C. A. (2008). High-risk pregnancy and hypoluteoidism in the bitch. *Theriogenology*, 70: 1424-1430.
8. Linde-Forsberg, C. and Eneroth, A. (2000). Abnormalities in pregnancy, parturition and the periparturient period. In S. J. Ettinger, & E. C.
9. Lopate, C. (2008). Estimation of gestational age and assessment of canine fetal maturation using radiology and ultrasonography: A review. *Theriogenology*, 70: 397-402.
10. Moon, P.F., Erb, H.N., Ludders, J.W., Gleed, R.D. and Pascoe, P.J. (1998). Perioperative management and mortality rates of dogs undergoing cesarean section in the United States and Canada. *J. Am. Vet. Med. Assoc.*, 213 (3): 365-369.
11. Schrank, M., Contiero, B. and Mollo, A., (2022) Incidence and concomitant factors of cesarean sections in the bitch: A questionnaire study. *Front. Vet. Sci.*, 9: 934273. doi: 10.3389/fvets.2022.934273.
12. Stolla, R., Dusi-Farber, B., Stengel, B., Schmid, G. and Braun, J. (1999). Dystocia in the bitch: A retrospective study. *Wiener Tierärztliche Monatsschrift*, 86: 145-149.
13. O'Neill, D.G., O'Sullivan, A.M., Manson, E.A., Church, D.B., Boag, A.K., McGreevy, P.D. and Brodbelt, D.C. (2017) Canine dystocia in 50 UK first-opinion emergency-care veterinary practices: prevalence and risk factors. *The Veterinary Record*, 181: 88.
14. Darvelid, A. W. and Linde-Forsberg, C. (1994). Dystocia in the bitch: A retrospective study of 182 cases. *Journal of Small Anim. Practice*, 35: 402-407.
15. Mosier, J.E. (1986). Normal and abnormal parturition. In: *Small Animal Reproduction and Fertility. A clinical approach to diagnosis and treatment*. Edt. Bruke, T.J. and Febiger, L., Philadelphia, USA, Pp. 335-345.