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Successful management of dystocia with multiple uterine rupture in a French bulldog due to fetal anasarca

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Abstract

The present communication reports the successful management of a delayed case of dystocia due to fetal anasarca with multiple uterine rupture in a French bulldog and its rare incidence.

Keywords: fetal anasarca, french bulldog, C- section, uterine rupture

Introduction

Fetal anasarca is a condition which is characterized by excessive accumulation of fluid in subcutaneous tissues and most commonly reported in cows, rare in carnivores (Roberts, 1971) [6]. But the incidences were higher in certain recognized breeds of dogs; they are English and French Bulldogs and Pugs (Cunto *et al.*, 2014) [1]. Fetal anasarca or hydrops fetalis also called as congenital edema, water puppies and walrus puppies (Sridevi *et al.*, 2014) and It is a congenital disorder arises from imbalance in the homeostasis of the fetal fluids (Selvaraju *et al.*, 2004 and Cunto *et al.*, 2014) [9, 1]. Most often fetal anasarca end with dystocia (Selvaraju *et al.*, 2008, Selvaraju *et al.*, 2018 and Periyannan *et al.*, 2021) [8, 10, 7] due to it abnormal oversize and uterine rupture with anasarca is rare. Hence, the present report explains about incidence of fetal anasarca with multiple uterine rupture and its effective management in a French bulldog.

Clinical examination

A full term French bulldog on its first gestation was presented to Small Animal Gynaecology unit, Department of clinics, VCRI, Namakkal with a history of greenish black vaginal discharge and frequent abdominal straining for the last 34 hours. Two futile inductions were done with oxytocin by a field veterinarian. On clinical examination all the physiological parameters were normal except the temperature it was subnormal and dyspnea also noticed. Abdominal palpation of animal revealed a retained fetus, during vaginal examination greenish black discharge noticed and fetal extremities were palpable. By using of Ultrasonography and radiography number of fetuses (Fig. 1) and livability were assessed.

Treatment

After the clinical examination the animal was treated with inj. calcium gluconate 10ml, inj. Dextrose 25% 100 ml and oxytocin 10 IU intravenously and after the induction there was no progress in whelping. Based on the history and clinical examination it has been decided to go for c- section. Under general anesthesia by using propofol (4mg/kg) the animal was placed in dorsal recumbency followed by the aseptic preparation of surgical site. The linear skin incision was made just below the umbilicus and uterus was exposed after the linea alba incision. Examination of exposed uterus revealed multiple uneven uterine tear (Fig. 2) and peritoneal contamination with greenish uterine contents. By gentle milking three normal, two anasarcus live fetuses (Fig.4) were removed from the uterus (Fig. 3) and one dead fetus was removed from abdominal cavity and that two anasarcus fetuses died few minutes later. Followed by the removal of fetuses uneven multiple uterine ruptures and surgical incisions were sutured with two layers of inversion sutures using no.1 catgut. The uterus and peritoneal cavity were cleaned with metronidazole followed by the normal saline. Finally, all the surgical incisions were closed by standard procedures. Post operatively the animal was treated with inj. Ceftriaxone 20 mg/kg, inj. Tramadol 2 mg/kg and inj. metronidazole 20 mg/kg for 5 days

intravenously. The sutures were removed 10 days later and animal recovered uneventfully (Fig. 5).

On cross examination of dead anasarcus puppies, the fluid accumulation was noticed throughout the fetal body and postmortem examination of puppies revealed no abnormality except necrosis of the kidneys. Other three live puppies were normal without any deviations in the physiological parameters. The fetal membranes were edematous similar findings were reported by Selvaraju *et al.* (2020) [11] in ewes.

Discussion

The degree of the fluid accumulation in fetal anasarcus condition is usually mild to severe; it may affect one or two puppies and it can be diagnosed ultrasound for the betterment of other puppies (Sridevi *et al.*, 2016) [12]. Puppies may be live at the time of removal but they will die within the very shorter period and successful treatment of affected puppies by using of furosemide also reported in the case of mild degree of fluid accumulation (Cunto *et al.*, 2014) [1]. Weight of the anasarcus puppies was two times higher than the normal littermates and most preferably puppies were removed by C- section (Gokulakrishnan *et al.*, 2008; Latha *et al.*, 2014. Cunto *et al.*, 2014 and Sridevi *et al.*, 2016) [2, 3, 1, 12]. Similarly, in this present case also C-section performed but multiple uneven uterine rupture makes difficulty in uterus handling and suturing. Etiological factors for peripartum uterine ruptures are infection, dead fetus, uterine torsion and indiscriminate use of oxytocin (Noakes *et al.*, 2004) [5] and in the present case rupture was associated with anasarcus puppies. Most of the uterine rupture condition was managed with enbloc Ovariohysterectomy (Navya *et al.*, 2017) [4] but considering economical reproductive life of dog the uterus was sutured and restored for future breeding.

Conclusion

Success full management of uterine tare associated with fetal anasarca is very rare in canine. Considering rarity the present case was presented

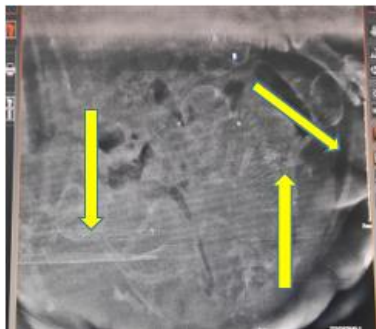


Fig 1: Radiographical examination revealed presence of puppies



Fig 2: uneven uterine ruptures.



Fig 3: Three normal live puppies delivered by c- section



Fig 4: Subcutaneous accumulation of fluid noticed throughout the body



Fig 5: Healthy dog with active pups 35 days after the C- section

References

1. Cunto M, Zambelli D, Castagnetti C, Linta N, Bini C. Diagnosis and treatment of foetal anasarca in two English Bull dog puppies. *Pakistan Veterinary Journal* 2014;35(2):251-253.
2. Gokulakrishnan M, Vijayanand V, Thirunavukkarasu PS, Rajasundaram RC. Fetal anasarca in a Dachshund puppy *Indian Journal of Veterinary Surgery* 2008;29(2):141.
3. Latha C, Radhakrishna Rao J, Murali Mohan K. Management of Obstructive Dystocia due to Fetal Anasarca in a Bitch. *Intas Polivet.* 2014;15(II):361-62.
4. Navya M, Bibin Becha B, Sudha G, Chethana DH, Deepti CR. Periparturient Rupture Of Uterus And Abdominal Entrapment Of Foetus In a Labrador Dog. *Indian journal Canine Practice* 2017;9:30-32.
5. Noakes DE, Parkinson TJ, England GC. Injuries and diseases incidental to parturition. In: *Arthur's Veterinary Reproduction and Obstetrics.* 8th Edn .Eds. Noakes DE, Parkinson TJ, England GC, Saunders WB, Philadelphia 2004, 319-332.
6. Roberts SJ. *Veterinary Obstetrics and Genital Diseases.*2

- edn .CBS Publishers, New delhi, India 1971, 179-181.
7. Periyannan M, Selvaraju M, Senthilkumar K, Abhishek Subhash Gawahne, Palanisamy M, Gopikrishnan D. Rare incidence of dystocia due to fetal anasarca with ascites in a jersey crossbred heifer. *The Pharma Innovation Journal* 2021;10(10):560-562.
 8. Selvaraju M, Palanisamy M, Ravikumar K, Prabaharan V, Ravi R, Ezakial Napoleon R *et al.* Dystocia due to foetal Anasarca with Ascites in a Sheep- A case report. *Journal of Vet Animal Sciences* 2008;39:62-63
 9. Selvaraju M, Vijay D, Chandrahasan C. A case of foetal anasarca in a sheep. *Indian Veterinary Journal* 2004;81:590-591.
 10. Selvaraju M, Varudharajan V, Prakash S, Ravikumar K, Senthilkumar K. Bull Dog monster dystocia with *Schistocephalus Fissilabrus*, Fetal ascites and Anasarca in a Doe. *Indian Veterinary Journal*. 2018;95:57-58.
 11. Selvaraju M, Prakash S, Varudharajan V, Ravikumar K, Palanisamy M, Gopikrishnan D *et al.* Obstetrical disorders in farm animals – A review. *The Pharma Innovation Journal* 2020;9(9):65-74.
 12. Sridevi P, Reena D, Safiuzamma M. Diagnosis Of Fetal Anasarca By Real Time Ultrasonography In A Pug Bitch And Its Surgical Management. *Indian Journal of Animal Reproduction* 2016;37(2).