NEW ERA AGRICULTURE MAGAZINE

Surgical Management of Cervicovaginal Prolapse in a Bitch

M.Vigneswari

Abstract

A 3 years old non-descript female dog was presented to People for Animals with the history of prolapsed mass from the vulva. On clinical examination, cervicovaginal prolapse with entrapped urinary bladder and necrotic wound with maggot infestation was noticed. Haematobiochemical values were within normal range except for decreased haemoglobin count. Initially the dog was stabilised with fluid therapy, antibiotics and analgesics and treated for maggot infestation. Under aseptic condition, surgical intervention was carried out by premedication inj. Diazepam @ 0.5mg/kg and inj. Propofol @ 4mg/kg b.wt intravenously, induction and maintenance with inj. Propofol @ 2mg/kg intravenously. Urine was relieved after catheterization with the infant size 6 and the prolapsed mass was reduced back into the abdominal cavity and ovariohysterectomy was performed. A vulval sutures were applied to prevent recurrence of prolapse. Postoperatively, oral antibiotics and analgesics were given for 7 and 3 days. On the 10th postoperative day sutures were removed and animal made an uneventful recovery.

Keywords: cervicovaginal prolapse, dog.

Introduction:

Vaginal prolapse involves the protrusion and eversion of the vaginal mucosa with the prolapse occurring cranial to the urethral papilla occasionally with the abdominal organs or urinary bladder entrapment within the prolapse (Baki and Birdane, 2017; Canatan *et al*., 2015; Besalti and Ergin, 2012). It is generally not seen in middle of the gestation and in normal pregnancy because of higher serum progesterone and lower estrogen and its also rare pregnancy or weakness of vaginal connective tissue which leads to swelling of mucosa cranial to the urethral orifice and become edematous (Johnston *et al*., 2001; Okkens, 2001; Fossum, 2013). A cystocele is a type of vaginal prolapse in which the bladder herniates caudally into the pelvic canal and presses on the anterior vaginal wall and gets entrapped within the prolapse (Jelovsek *et al*., 2007; Canatan *et al*., 2015). This present paper describes about the surgical management of cervicovaginal prolapse with urinary bladder entrapment along maggot infestation.

M.Vigneswari
Shelter Veterinarian
People for Animals, Ponda, Goa, India.

Case history and Observations

A 3 years old non-descript female dog weighing about 15kg was presented to People for Animals with the history of prolapsed mass from the vulva (**Fig 1**). Physiological parameters like heart rate, respiratory rate and rectal temperature were within normal range. On clinical examination, animal was dull and depressed, cervicovaginal prolapse with entrapped urinary bladder and necrotic wound with maggot infestation was noticed. Haematobiochemical values were within normal range except for decreased haemoglobin (10gm) count.

Fig 1: Before surgery cervicovaginal prolapse

Treatment

Initially the dog was stabilised with inj. Dextrose normal saline @ 20ml/kg b.wt and inj. Cefotaxime @ 50mg/kg b.wt intravenously and inj. Meloxicam @ 0.3mg/kg b.wt intramuscularly. Necrotic edges were excised and the live maggots were removed and the wound was cleaned with 5% povidone iodine solution. Catheterization of the urinary bladder with size 6 was achieved and urine was relieved.

Under aseptic condition, surgical intervention was carried out by premedication inj. Diazepam @ 0.5mg/kg and inj. Propofol @ 4mg/kg b.wt intravenously, induction and maintenance with inj. Propofol @ 2mg/kg intravenously. Urinary catheterization was achieved with infant size 6 and urine was collected and urinary bladder was reduced. The prolapsed mass was cleaned with 5% dextrose saline solution and reduced back into the abdominal cavity. Animal was positioned on dorsal recumbency and an incision was made on the midventral abdomen, both ovaries, uterus was ligated and ovariohysterectomy was performed. Abdominal muscles, subcutaneous layer and skin were closed routinely. A vulval sutures were applied after reduction of vaginal prolapse to the prevent recurrence (**Fig 2**). Postoperatively, the animal was administered with oral medication tab. Cefpodoxime @ 10mg/kg b.wt and tab. Meloxicam @ 0.3mg/kg b.wt for 7 and 3 days, respectively. The sutures site was dressed with povidone iodine solution every 3 days interval and the sutures were removed on the 10th postoperative day and the animal recovered uneventfully.

Fig 2: A vulval sutures were applied after reduction of vaginal prolapse to the prevent recurrence

Discussion

Vaginal prolapse commonly occurs in young female dogs of all breeds and ages during the proestrus or estrus period especially when blood estrogen levels are high (Jhonston *et al*., 2012; Zedda *et al*., 2016). According to Haji *et al*., 2018, the floor of the vagina cranial to the urethral tubercle is involved, but on some occasions the entire vaginal mucosal wall is included and the exposed tissue immediately becomes edematous, inflamed and easily traumatized which was in agreement with our study. Mostly the dogs are presented with a condition varying from a small perineal bulge to a tongue-shaped or pear-shaped mass protruding from the vulva however in our case, the dog was presented with the prolapsed mass which was cylindrical in shape with urinary bladder entrapped. Singh, 2019 stated that in moderate to severe cases or in absence of surgical management the mass which protrudes from the vulva, must be kept clean and moist; however, the case was presented with maggot infestation and was treated before the surgery. Although our case was presented with severity, initial stabilization with fluid therapy, prompt treatment for maggot infestation, emptying of urinary bladder and ovariohysterectomy made our case successful and animal made an eventful recovery (Jhonston *et al*., 2012; Zedda *et al*., 2016).

References

1. Baki AD, Birdane MK. Urinary bladder retroflexion and dystocia in a bitch with the vaginal supportive connective tissue failure. *Vet Fak Derg*. 2017; 64:61–64.
2. Canatan HE, Ergin I, Polat IM, Yazlik MO. Unusual cases of vaginal prolapse concurrent with cystocele in two dogs. *Revue Med Vet*. 2015; 166:43–46.
3. Besalti O, Ergin I. Cystocele and rectal prolapse in a female dog. *Can Vet J*. 2012; 53:1314–1316.
4. Jelovsek JE, Maher C, Barber MD. Pelvic organ prolapse. *Lancet*. 2007; 369:1027–1038.
5. Fossum TW (2013). Soft Tissue Surgery. In: Small Animal Surgery. (4th Edn.) *St. Louis, Mosby, Missouri. Elsevier*. pp. 824-826.

6. Johnston SD, Kustritz MVR and Olson PNS (2001). Canine and Feline Theriogenology. *W.B. Saunders Company, London, United Kingdom*.
7. Okkens AC. Vaginal edema and vaginal fold prolapse in the bitch, including surgical management. 2001.
8. Alan M, Cetin Y, Sendag S and Eski F (2007). True vaginal prolapse in a bitch. *Animal Reproduction Science,* 100(3): 411-414.
9. Zedda MT, Bogliolo L, Ariu F, Ledda M, Falchi L, Pinna- Parpaglia ML and Pau S (2016). Vaginal fold prolapse in a dog with pyometra and ovarian papillary cystadenocarcinoma. *Journal of the American Veterinary Medical Association,* 248(7): 822-826.
10. Johnston SD, Kustritz MVR and Olson PNS (2001). Canine and Feline Theriogenology. *W.B. Saunders Company, London, United Kingdom*.
11. Haji MM, Borpujari D, Talukdar DJ, Ahmed FA, Lalrintluanga K and Sarma K (2018). Cystic endometrial hyperplasia - open pyometra complex in a female pug. *Indian Journal of Animal Reproduction,* 39(1): 63-65.
12. Wykes PM (1986). Diseases of the vagina and vulva in the bitch. In: Current therapy in Theriogenology. David A. Morrow (Edt), *WB Saunders Company Philadelphia,(1st Edition)*. pp. 478-480.
13. Simon MS, Gupta C, Sankar P, Ramprabhu R, Pazhanivel N and Prathaban S (2016). Surgical management of recurrent vaginal prolapse in bitches - A review of five cases. *Indian Veterinary Journal,* 93(11): 54-56.