


Indian Vet. J., October 2015, 92 (10) : 61 - 63

Surgical Management of Uterine Torsion in a Bitch

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(Received : 15-02-2014; Accepted : 14-07-2014)

Abstract

Uterine torsion is an uncommon disorder of bitch and is more likely to occur in the pregnant animals. A five year old Labrador bitch was presented to the Madras Veterinary College teaching hospital with symptoms of continuous straining after delivery of last puppy. On abdominal palpation, palpable foetal mass was observed. Radiography also revealed single foetal skeleton, since it was a delayed case emergency caesarean section was performed. After opening the abdomen, careful examination of uterus showed torsion of the right uterine horn at the level of bifurcation, Ovariohysterectomy was performed and the animal had an uneventful recovery.

Key Word: Unilateral uterine torsion – dystocia – Bitch – Ovariohysterectomy

Twisting of the uterus on its own long axis results in torsion of uterus. It is an uncommon but life threatening condition in the bitch. Violent uterine contractions and instability in uterine horn might be a cause for torsion of uterus. It may also be caused by lack of fetal fluid and sudden fall / rolling (Jackson, 2004). Clinical signs will be of an obstructive dystocia where puppies remained in the uterus (Raut et al., 2008). Uterine torsion results in a quickly deteriorating shock like state associated with severe abdominal pain. This report describes a case of uterine torsion in a whelping bitch with a retained fetus.

Case History and Observations

A five year old Labrador bitch was presented to the small animal Gynaecology ward with the history of having whelped 5 pups on the previous day and with continuous straining noticed after delivery of last puppy. First whelping occurred at the age of 4 years. It was spontaneous without any complication and had delivered 5 puppies.

On physical examination general condition of the bitch was dull with a body temperature of 39.8ºC. Respiration and pulse was within the normal limits. The bitch showed continuous straining. Examination of genitalia revealed edematous vulval lips, pink and moist vaginal mucous membrane with greenish black vaginal discharge. Vaginal examination revealed no fetal parts in the passage. On abdominal palpation a

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The Indian Veterinary Journal (October, 2015)
palpable fetal mass was observed. A non-viable foetus with hyper echoic uterine contents was visualized through ultrasonography. Radiography revealed presence of a single fetal skeleton (Fig: 1)

**Treatment and Discussion**

Since it was a delayed case an emergency caesarean section was opted. The bitch was pre medicated using inj. Atropine sulphate @ 0.02mg/kg and sedated with inj.Xylazine @ 1mg/kg and necessary preoperative preparations were carried out. Then under a combination of anaesthesia using inj. Ketamine @ 4 mg/kg and inj. Diazepam 0.27mg/kg @ mg/kg, the bitch was restrained at dorsal recumbency on the table. Uterus was approached through a mid-ventral incision. After opening the abdomen a discolored uterus with an extensive serosal tear was observed. On opening the uterus a dead emphysemated fetus along with a huge mass of clotted blood was observed in the right horn of the uterus which was the reason for hyper echogenecity on ultrasonography (Fig: 2). The left horn was empty without any evidence of involution. Careful examination of the uterus showed torsion on the right uterine horn at the level of bifurcation (Fig: 3). Since it was delayed case with an Emphysemated foetus (Fig: 4) along with uterine necrosis, it was decided to go for ovariohysterectomy after getting consent from the owner. The muscle layer was closed by a simple continuous followed by stay suture using PGA No.1. The subcutaneous layer was

![Fig.1: Radiograph showing enlarged uterus along with single foetal skeleton](image1)

![Fig.2: Right uterine horn along with clotted blood retrieved from the horn](image2)

![Fig.3: Right side uterine torsion](image3)

![Fig.4: Dead Emphysemated fetus relieved after caesarean section](image4)

*The Indian Veterinary Journal (October, 2015)*
closed by simple continuous using PGA No.1-0. The skin was closed by subcuticular suture using PGA No. 1. Dressing of the suture site with drez ointment was done on alternate days for 5 days. Post operative care with drugs (inj. Evacef - (Cefotaxime -Neon labs) – 250 mg i/v, Inj. C.P.M. – 7mg, i/m, Inj.Melonex (Meloxicam - Intas pharmaceuticals) – 7.5 mg i/m) were given for 5 consecutive days. On 5th day the skin was healed properly with very good apposition. The animal had an uneventful recovery.

Occurrence of uterine torsion was very rare in polytocus species like bitch. An incidence of only 1.1% was reported by Walett-Darvelid and Linde-Forsberg over a 4.5 year period at the veterinary hospital (Noakes et al., 2009). Unilateral torsion was more likely to occur than bilateral (Shull et al., 1978). Uterine torsion may occur due to jumping, running or rolling behavior during excessive play, premature uterine contraction in late pregnancy, foetal physical activities, partial abortion, hereditary weakness or variations in length and mobility of the proper ovarian and uterine ligaments and use of oxytocin. In a pregnant bitch, uterine torsion may develop following the delivery of a healthy or dead puppy. Puppies may be born from the non-rotated, sound horn or from the caudal aspect of the rotation site of the uterine horn in a partial torsion. In the present case the bitch had already delivered 5 live puppies. The point of torsion was at the level of bifurcation. There was a chance that all the 5 normally delivered puppies were from the left horn. Severe torsion can cause obstruction of the blood supply to the uterus, with resulting thrombosis or rupture of uterine vessels, congestion, shock, fetal and/or maternal death. Mortality associated with this condition was high because of variety of life-threatening complications including endotoxic shock, peritonitis and haemostatic abnormalities.

Total Ovariohysterectomy is the treatment of choice in torsion induced uterine necrosis terminating the animal’s reproductive ability. En block ovariocornuectomy can be done in unilateral uterine torsion to preserve the fertility of the bitch with a history of high pedigree. However, it is feared the uterine rupture or perforation at the cornuectomy site at the bifurcation might occur during labor of future pregnancies or parturition. Another concern was that the lack of an attachment to the operated side of the unicorn uterus might facilitate again uterine torsion during subsequent pregnancies (Kumru et al., 2011). Since the owner was not interested in future breeding of the bitch and also considering the above said complications in unilateral cornuectomy, total ovariohysterectomy was performed in this animal.

Summary
A case of dystocia due to unilateral uterine torsion and its successful management through cesarean section, followed by ovariohysterectomy has been discussed in a Labrador bitch.

References