CASE REPORT

Successful Management of a Rare Case of Dystocia in a Goat due to Ventro-Lateral Abdominal Hernia of Gravid Uterus

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Dystocia or difficult birth, a condition in small ruminants (sheep and goat), results in huge economic losses to farmers either due to death of new born(s) or dam and adversely affects dam fertility (Mcsporran, 1980). In goat, the incidence of dystocia is low (Bhattacharyya *et al.,* 2015). Obstetrical problems in goats are similar to those in sheep (Majeed, 1994), however, the incidence of dystocia is considered higher in goats compared to ewes (Mehta *et al*., 2002). Hernia of the gravid uterus occasionally occurs during advanced pregnancy in ruminants usually to the right side of the abdominal floor (Roberts, 1971), leading to dystocia (Oehme and Prier, 1974). Ventral abdominal hernia occurs mainly due to any trauma such as a kick, blow, horn thrust or falling on blunt objects or automobile accidents (Radhakrishnan *et al*., 1993) and rupture of prepubic tendon (Frank, 1981; Arthur, 1989). The condition is generally observed in pluriparous small ruminants in advanced pregnancy with multiple fetuses, which leads to fragility of abdominal muscles or prepubic tendon (Vijayanand *et al.,* 2012). This paper presents successful management of a rare case of dystocia in a goat due to ventro-lateral abdominal hernia of gravid uterus.

Case History and Clinical Observation

A non-descript doe of about 3 years of age with full term of pregnancy in its third parity was presented to the Veterinary Clinical Complex, of the College at Kumarganj, Ayodhya with the history of straining for last 5 hours, intermittent vaginal discharge and acute distended abdomen. Swelling was present on the ventro-lateral portion of left side abdomen (Figure 1), which resulted from a car accident before one month ago. The animal was dull, depressed, showing anorexia since last 6 hours and rectal temperature was 103.5°F. Per vaginal examination revealed fully dilated cervix and a fetus in anterior longitudinal presentation, dorso-sacral position with slight lateral deviation of head and neck. Palpation of the herniated mass with fingers revealed fluid thrill and fetal parts just beneath the skin of the left side abdomen. Fetal movements were observed in the udder region indicating a live fetus. The case was diagnosed as dystocia due to ventro-lateral abdominal hernia of gravid uterus (Figures 2 and 3).

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Treatment and Discussion

After proper lubrication of birth canal with liquid paraffin, posture of the fetus was corrected. The fetus was pushed back into the uterine cavity to correct deviation of the head and neck and a dead fetus (Figure 2) was removed manually by holding the lower jaw of the fetus. Further, per-vaginal examination revealed presence of two live fetuses inside

Figure 1: Photograph showing Doe with herniated gravid uterus

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Figure 2: Photographs showing one dead fetus

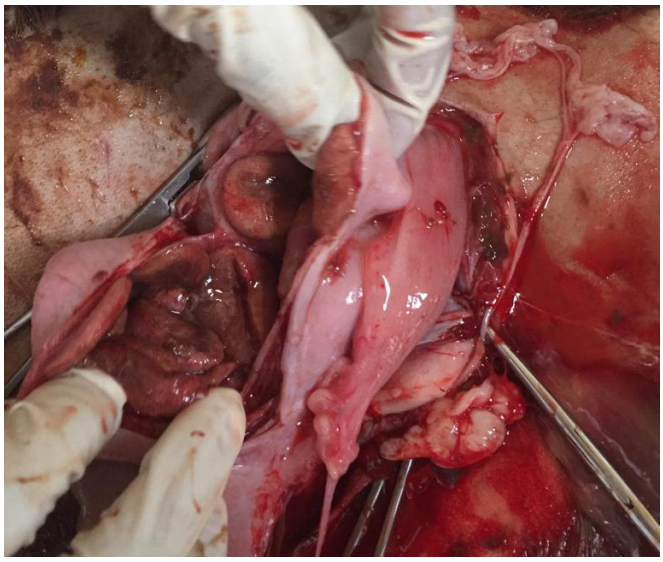

Figure 3: Photograph showing incised uterus

uterine cavity, which were also removed by manual traction. Then, the placenta was removed by gentle traction. After removal of placenta from the uterus, per-vaginal examination was performed to rule out presence of fetus in the uterine cavity. Moreover, palpation of the herniated mass through the left abdominal wall revealed presence of one more live fetus. By pushing the herniated mass inside the abdomen, the remaining fetus could not be delivered per-vaginum. Therefore, it was decided to perform Cesarean section for delivery of the fetus and herniorrhaphy was performed for repair of ruptured abdominal wall.

The doe was placed on right lateral recumbency. Herniated area was shaved, disinfected and prepared for an aseptic Caesarean section. Prior to surgical intervention, animal was administered with inj. Dexamethasone (1.5 ml/50 kg b.wt., IM) and normal saline solution 500 ml IV. The animal was sedated with Xylazine hydrochloride @ 0.1 mg/kg b.wt. by IM route. The incision site was desensitized with a local infiltration of 2% lignocaine hydrochloride. An incision of 5 inch length was made in the center of the herniated portion. The skin, peritoneum and uterus were incised as per standard technique (Figure 3) and a live male fetus was removed. After flushing of uterine horn with 500 ml of normal saline and 100 ml of metronidazole, it was closed by double layers of Lambert suture with chromic catgut no. 2 and then the uterus was placed in position. The peritoneum was closed with simple continuous suture by using chromic cat gut no. 2. In the lower abdominal muscles, a tear of about 15 cm length was noticed. Correspondingly the skin incision was extended and the ruptured muscles were closed one by one with horizontal mattress suture using a non-absorbable suture material (proline no. 2). The skin incision was closed with simple interrupted suture using silk thread no.2. Thus, total three live fetuses were delivered (Figure 4), two by manual traction and one by Caesarean section.

Figure 4: Photographs showing three live fetuses

The animal was administered with inj. Dextrose 5% (500 ml, IM) for 3 days, and inj. Enrofloxacin @ 5 mg/kg b.wt., inj. Meloxicam @ 0.5 mg/kg b.wt., inj. Chlorpheneramine maleate @ 0.5 mg/kg b.wt, and inj. Tribivet 2 ml, IM for 7 days. The goat started taking feed from the next day onwards and made an uneventful recovery. The skin sutures were removed on 10th day postoperatively.

Mother having more than one hour of active labor without producing newborn results in dystocia (Bowen, 1978). In the present case, prolonged uterine contraction against an abnormal fetal posture results in exhaustion of the myometrium leading to failure of fetal expulsion. Ventral hernia of gravid uterus is rarely seen in goats (Vijayanand *et al.,* 2009) and mostly occurs due to sudden rupture or trauma to the abdominal wall either by accident or by

fighting. Surgical correction (herniorrhaphy) is useful in large hernial opening while extensive hernial opening may require hernioplasty (Jettennavar *et al.,* 2010).

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