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## A rare case of fetal ascites in goat and it's surgical management

**Abhinav Singh, Brijesh Kumar Yadav, Avaneesh Kumar Singh, Jitendra Agrawal and Atul Saxena**

**Abstract**

A pluriparous non-descript goat was presented to the clinic with the complaint of non-progression of parturition, even the gestation period had completed. Vaginal discharge was seen by the owner. Animal was straining since 24 hours. Ultrasonographic examination revealed the anechoic images of fetal fluid and hyper echoic images of fetal vertebrae. Per-vaginal examination revealed the harder and non-dilated cervix. Therefore, caesarian operation was performed and a fetus with enlarged abdomen (due to accumulation of fluid) was delivered. Animal recovered uneventfully after follow-up treatment and advice.

**Keywords:** Goat, dystocia, ascities, fluid, caesarean

**Introduction**

Foetal ascites is seen as a cause of dystocia in many species but occurs rarely in goats [2]. Ascitis refers to the accumulation of serous fluid in the peritoneal cavity which is caused by variety of etiological factors [9]. It may be caused either by the overproduction or insufficient drainage of peritoneal fluid [12]. Ascites can also occur due to reduced urinary excretion [12]. Moreover the obstruction of the lymphatic may prevent the disposal of peritoneal fluid and lead to fetal ascites [15]. The etiology for polycystic kidney was not established yet, however, some etiologies responsible for renal cyst conditions are recognized to be related with autosomal recessive genes [16], chemicals like corticosteroids [3] and diphenylamine [17]. Honparkhe *et al.* (2003) and Roberts (2004) reported the association of fetal ascites with dropsical condition of the uterus, mesotheliomas of the fetal abdomen and brucellosis. Moreover, fetal skin and subcutaneous tissue gets accumulated with a lot of fluid which may cause serious birth problem [7]. Management of dystocia with fetal ascites warrants evacuation of accumulated fluid [6] or caesarean operation [4]. Sharma *et al.* (2001) successfully delivered a monster from ewe by caesarian section. The present case also reports a rare case of fetal ascites in a non-descript goat and it's surgical management.

**Case history and observations**

A pluriparous non-descript goat was presented to veterinary clinical complex DUVASU, Mathura with the complaint of reddish vaginal discharge and straining for 24 hours but yet not delivered the fetus. According to owner animal was full term pregnant. Per vaginal examination revealed that the cervix was not dilated. Texture of the cervix was somewhat harder. Animal was dull and depressed. Owner was not confirmed about the rupture of water bag. On USG examination showed the anechoic images of fetal fluid and hyper echoic images of fetal vertebrae. Due to narrow birth canal passage and condition of the animal, it was decided to perform caesarean section.

**Treatment**

Firstly goat was restrained in right lateral recumbency and incision site (ventro-oblique on lower left lateral abdomen) was prepared. Intravenous fluid was administered with Inj. ringer lactate @ 500 ml and Inj. dexamethasone @ 10 mg. After preparation of site subsequently skin, fascia, parietal peritoneum, muscles, visceral peritoneum were incised. After laparotomy, initially we felt difficulty to find the uterus because the size of the gravid uterus was very small and it was approachable at depth inside the abdomen. Thereafter gravid uterine horn was

incised. Then the fetal limbs were pulled outside (Figure 1) and a small sized ascetic fetus was delivered (Figure 2). The uterus was sutured with a continuous inverting pattern (cushing), using vicryl no. 2 suture followed by second layer of lambert suture pattern. The peritoneum and the separated abdominal muscles were sutured by vicryl no. 2 in a lockstitch suture pattern followed by sub-cuticular suturing using braided silk no. 1. The skin was sutured by horizontal mattress pattern, using nylous. Post operatively animal was treated with intramuscular injections antibiotics (ceftriaxone @ 15 mg/ kg body weight), NSAIDs (meloxicam @ 0.2 mg/ kg body weight), antihistaminics (pheniramine maleate @ 2 ml) and multivitamins @ 3 ml and antiseptic dressing with providone iodine for next 5 days. Animal was recovered uneventfully and sutures were cut after 12 days.



**Fig 1:** Expulsion of fetal limb during caesarean operation



**Fig 2:** Delivered small sized ascetic fetus

### Discussion

Dystocia is defined as any birth that reduces neonatal viability, causes maternal injury, or requires assistance [11]. Dystocia occurs more frequently in sheep than goats [5]. The various types of monsters and congenital abnormalities in farm animals reported in literature include conjoined twins, Schistosomus reflexus, perosomus elumbis, hydrocephalus, fetal anasarca, foetal ascites and chodroplastic monsters [1]. Prabakaran *et al.*, (2016) reported the delivery of two fetuses in a kanni adu doe, one of which was affected with fetal ascites with anasarca condition and another was live fetus. Prakash *et al.*, (2017) reported the fetal ascitis with brachynathism condition in the posterior presentation in a non-descript doe. Bhardwaj *et al.*, (2019) reported the fetal ascites in boer goat and relieved the fetus by giving an incision on the hind limb and making an entry into the fetal abdomen to take out the fluid and evisceration was done.

### Conclusion

The fetal ascites in small ruminants can be diagnosed either by per-vaginal examination or at the time of caesarean

operation. In the present case, successful delivery of ascites fetus was achieved by caesarean operation.

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