



ISSN (E): 2277- 7695

ISSN (P): 2349-8242

NAAS Rating: 5.23

TPI 2021; SP-10(11): 80-82

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www.thepharmajournal.com

Received: 07-09-2021

Accepted: 09-10-2021

Rajkumar R

Assistant Professor, Veterinary Clinical Complex, Veterinary College and Research Institute, Tamil Nadu Veterinary and Animal Sciences University, Salem, Tamil Nadu, India

Ravikumar C

B.V.Sc. Student, Veterinary College and Research Institute, Tamil Nadu Veterinary and Animal Sciences University, Orathanadu, Tamil Nadu, India

Prabaharan V

Assistant Professor, Department of Veterinary Gynaecology and Obstetrics, Veterinary College and Research Institute, Tamil Nadu Veterinary and Animal Sciences University, Orathanadu, Tamil Nadu, India

Raja S

Assistant Professor, Department of Veterinary Gynaecology and Obstetrics, Veterinary College and Research Institute, Tamil Nadu Veterinary and Animal Sciences University, Orathanadu, Tamil Nadu, India

Palanisamy M

Professor, Department of Veterinary Gynaecology and Obstetrics, Veterinary College and Research Institute, Tamil Nadu Veterinary and Animal Sciences University, Namakkal, Tamil Nadu, India

Corresponding Author

Rajkumar R

Assistant Professor, Veterinary Clinical Complex, Veterinary College and Research Institute, Tamil Nadu Veterinary and Animal Sciences University, Salem, Tamil Nadu, India

Management of dystocia due to fetal anasarca with ascites in a Kanni adu goat

Rajkumar R, Ravikumar C, Prabaharan V, Raja S and Palanisamy M

Abstract

A full term pregnant Kanni adu doe with the history of restlessness, showing continuous straining for four hours was referred to Large Animal Obstetrical Unit, VCRI, Orathanadu by field veterinarian after unsuccessful treatment. Per vaginal examination revealed that the fetus was in poll presentation with absence of fetal reflexes indicating dead fetus. Thorough examination of the fetus revealed large sized fetus with distended abdomen that fluctuated on pressure suggestive of fetal ascites. The fetus was repositioned into normal presentation by mutational operation. Traction was applied on the fetus using eye hook and a dead male fetus was successfully delivered. Gross examination of the fetus revealed moderate subcutaneous oedema throughout the body with accumulation of fluid in the peritoneal cavity. Hence the case was confirmed as fetal anasarca with ascites. The doe was treated with parenteral antibiotics, anti-inflammatory, anti-histamines, ecbolics and supportive therapy for 5 days. The animal recovered uneventfully.

Keywords: fetal anasarca, fetal ascities, Kanni adu goat, dystocia

Introduction

Dropsical conditions of fetus causing dystocia in domestic animals are fetal anasarca, fetal ascites and hydrocephalus. Fetal anasarca or excessive edema of fetus is seen most commonly in cattle but may affect sheep and goat. It may develop in a single fetus or one of twins (Roberts, 1971) ^[1]. The affected fetus is usually carried to term, and concern is caused by the lack of progress in second- stage labor. This is due to the great increase in fetal volume caused by the excess of fluid in the subcutaneous tissues (Long, 2001) ^[2]. Fetal ascites is excess accumulation of fluid in the peritoneal cavity. Fetal ascites is seen as an occasional cause of dystocia in any species but occurs most often in the cow. Fetal ascites is commonly associated with either infectious diseases or developmental defects of the fetus (Sloss and Dufty, 1980) ^[3]. Incidence of fetal anasarca along with ascites is rarely reported in goat (Prabaharan *et al.*, 2016; Sarangom *et al.*, 2020) ^[4, 5]. The present paper describes successful management of dystocia due to fetal anasarca with ascites in a Kanni adu doe.

Case history and Observation

A two years old nulliparous full term pregnant Kanni adu doe with the history of restlessness, inappetance, showing continuous straining for four hours was presented to Large Animal Obstetrical Unit of Veterinary Clinical Complex, Veterinary College and Research Institute, Orathanadu. The animal was treated by a local veterinarian and referred to this hospital. Rupture of water bag was reported seven hours back. The temperature was normal, however the pulse and respiratory rate was on higher side. On clinical examination, vulva was swollen and tear was noticed on ventral part of the vulva. Severe haematoma was also noticed on the ventral floor of the vestibule. Vaginal examination revealed that the cervix was fully dilated and the fetus was in anterior longitudinal presentation, dorso-sacral position, with downward deviation of head (Poll Presentation). The absence of fetal reflexes indicated that the fetus was dead. Thorough examination of the fetus revealed large sized fetus with distended abdomen that fluctuated on pressure suggestive of fetal ascites and the fetus wedged in the pelvic inlet.

Treatment and Discussion

Following epidural anaesthesia (2.0 ml, 2% Lignocaine hydrochloride), the birth canal was lubricated well with liquid paraffin. Then, the poll presentation was corrected by mutation operation. Traction was applied on the inner canthus of the eye using eye hook (Fig. 1) and a dead male fetus was successfully delivered.

Gross examination and dissection of the fetus revealed moderate subcutaneous oedema throughout the body with accumulation of fluid in the peritoneal cavity (Fig. 2 and Fig. 3). Hence the case was confirmed as fetal anasarca with ascites. Blood clots from the haematoma present in the floor of the vestibule were removed and 10% povidone iodine solution was applied after ligation of bleeding vessels. Vulval tear was sutured with PGA-1 by simple interrupted suture (Fig. 4). The doe was treated with injections of Enrofloxacin @ 5mg/Kg b.wt i/m, Meloxicam @ 0.1 mg/Kg b.wt i/m, Oxytocin @ 10 IU i/m and Uromet forte as intrauterine bolus. Antibiotic, anti-inflammatory, oral ecbolics and supportive therapy were continued for five days leading to uneventful recovery.

Dystocia is commonly caused by postural abnormalities and twin or triplet birth in goat. Fetal anasarca or ascites are occasionally seen in goat (Sloss and Dufty, 1980) [3]. Fetal anasarca is the result of a disturbance of fluid exchange and may be of placental origin. The fluid accumulation in subcutaneous space might be due to lack of lymph nodes and existence of autosomal recessive allele which affect normal embryological lymph node development (Monteagudo *et al.*, 2002; Chandrasekaran *et al.*, 2015) [6, 7]. Fetal anasarca usually develops in a single fetus alone. Rarely, fetal anasarca occurs in association with other fetal anomalies or monsters too (Jayachandra *et al.*, 2013) [8] and in the present case it was diagnosed along with fetal ascites.

Fetal ascites may be caused by overproduction or insufficient drainage of peritoneal fluid. The obstruction of the lymphatics may prevent the disposal of peritoneal fluid and lead to fetal ascites (Sloss and Dufty, 1980) [3]. Fetal anasarca and ascites cause dystocia due to the increased diameter of the fetus. Most anasarca fetuses are expelled dead. Fetuses with ascites condition are usually dead or weak or would fail to survive if delivered alive (Long, 2001) [2]. In the present case, a dead male fetus was delivered with anasarca and ascites condition.

In removing large anasarca fetuses, forced extraction is usually successful. If the fetus is too large, fetotomy including amputation of the forelimb and evisceration may occasionally be necessary. Rarely cesarean section might be indicated (Roberts, 1971) [1]. In the present case the fetus was delivered by traction using eye hook, since the condition was moderate. Prabakaran *et al.* (2016) [4] and Sarangom *et al.* (2020) [5] previously reported fetal anasarca with ascites condition in goat. The antenatal diagnosis of most of the commonly occurring fetal complications of gestation is partly possible with ultrasonography and such pregnancies should be carefully monitored or terminated (Laiju *et al.*, 2012) [9]. The present case reports fetal anasarca along with ascites in a Kanni adu goat and its successful per vaginal delivery by traction.



Fig 1: Traction of fetus by using eye hook



Fig 2: Anasarca fetus with ascites



Fig 3: Subcutaneous edema



Fig 4: Suture of vulval tear

Acknowledgment

Authors thank the Dean, Veterinary College and Research Institute, Orathanadu for the facilities provided.

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