



Fetal Ascites in a Cow: A Case Report

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ABSTRACT

A three and half year old Non-Descript (ND) cow was presented to Veterinary Clinical Complex, COVAS, Udgir with the history of completion of gestation period and appearance of first water bag before two hours animal admitted to the clinic. Per-vaginal examination revealed that fetus is in posterior longitudinal presentation and fetal abdomen is fluid filled, larger in size and distended. The case was diagnosed as dystocia due to fetal ascites. Incision was given on fetal abdomen to drain the excessive fluid using Robert's guarded knife following reduction, dead male fetus was delivered successfully by two-way coordinated traction.

Introduction

Fetal ascites refers to an excessive accumulation of fluid in the fetus's peritoneal cavity, a condition characterized by overproduction or insufficient drainage of peritoneal fluid (Kumar et al., 2019). The presence of ascites may stem from a developmental anomaly that impedes the lymphatic system's ability to efficiently remove peritoneal fluid. This condition could be linked to reduced water excretion through urine. With the fetus abdomen continually distended due to fluid build-up, delivering the fetus intact poses a considerable challenge without puncturing the abdomen (Katiyar et al., 2016). It can arise from either overproduction or ineffective removal of peritoneal fluid. In cows and buffaloes, condition can lead to dystocia (Purohit and Mehta, 2006; Selvaraju et al., 2009; Prasad et al., 2011; Krishnakumar et al., 2012). Present case reports

management of dystocia in a Non-descript (ND) cow due to congenital fetal ascites.

Case history and observations

The three and half year old ND cow in its second parity with the history of complete gestation period and straining since three hours was admitted to the Obstetrical Ward, VCC, COVAS, Udgir. The water bag was ruptured two hours before animal admitted to the clinic. The local veterinarian tried to help with the delivery but was unsuccessful. The clinical examination revealed the mucous membranes appeared pale pink and the rectal temperature was 102°F. Per-vaginal examination, revealed a completely relaxed and dilated cervix with the fetus in posterior longitudinal presentation, dorso-sacral position (Fig. 1)

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traction was applied to the hind limbs, revealing a right lateral deviation of head and fetal pelvis was palpable in the birth canal. Fetal abdomen is fluid filled, larger in size and distended. The case was diagnosed as fetal ascites. Fig. 2 and 3 depict the removal of the ascitic fetus and its post-partum condition, while Fig.4 illustrates the enlarged kidneys of the ascitic fetus.

Treatment and discussion

It was decided to give careful incision on fetal abdomen using Robert's guarded knife. Per-vaginally gloved hand was inserted in the uterus with the knife secured in palm. Fetal abdomen was punctured about 3-5 cm on ventral side caudal to umbilicus. As soon as the incision was given, about 5-10 liters of transparent serous exudates comes out through vagina. Fetal abdominal size was compressed using hand to drain the remaining fluid and subsequently the fetus was brought to dorso-sacral position. Flexion of both the hind limb was corrected and lubricated cotton rope was

tied on hind limbs to apply two-way coordinated traction on the fetus. Dead male fetus was delivered. Fetal membranes were expelled out immediately after delivery of the fetus. Just after the delivery, cow was treated with injections of 2 lit Dextrose-5, 1lit of RL by i/v and ecbolic (Methyl ergometrine) 5 ml once, Anti-histaminics (CPM-Zeet) 10 ml, Antibiotic (Enrofloxacin) 30 ml, NSAID (Flunixin meglumine) 10 ml by i/m route. Liquid Glyconeogenic precursor supplement (E-booster) @200 ml followed by 100 ml after every six hours and Nutritional Supplement (Calcium gel) 450 ml once p/o was also given. Intra uterine ecbolic (Ropitas) bolus was placed i/u. The electrolyte therapy was given after every 6 h to avoid haemodilution. The supportive therapy was advised for the next three days. The cow showed uneventful recovery after three days.

Fetal ascites can cause from various factors such as chromosomal abnormalities, hydrops, gastrointestinal and genitourinary issues, congenital heart defects, or infection (Akduman et al., 1997). It can occur alone or alongside other symptoms. Identifying the underlying cause is crucial



Fig. 1: Traction on Hind limb



Fig. 2: Dead male Ascitic fetus



Fig. 3: Fetal Ascites after delivery



Fig. 4: kidney of Ascitic fetus

for treatment, as certain cases may need urgent intervention, while those without a clear cause often resolve on their own.

Pathological condition

Fetal ascites involves abnormal fluid accumulation in the fetus peritoneal cavity, causing abdominal distension and further delivery complications/Dystocia. It may result from the congenital anomalies, chromosomal abnormalities, Autosomal recessive gene or infections. The posterior longitudinal presentation, Dorso-sacral position, the right lateral deviation of head combined with the distended/ascetic abdomen, necessitated surgical intervention to drain the fluid before successful delivery.

Conclusion

This present case study provides detailed insight of dystocia resulting from fetal ascites in a Non-Descript cow and its management by delivering the calf per-vaginally after excising the fetal abdomen with Robert's guarded knife. This case will provide the use of Robert's guarded knife in fetal ascites under field condition.

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