

Obstetrical Management of Fetal Ascites-Induced Dystocia in a Murrah Buffalo

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Dystocia due to fetal ascites is an occasional condition reported in several domestic species, though it is most commonly observed in cows (Roberts, 1971). Foetal ascites results from excessive accumulation of fluid within the fetal peritoneal cavity, which may occur due to either overproduction of peritoneal fluid or inadequate drainage. Impaired lymphatic drainage caused by congenital or acquired obstruction of lymphatic vessels is considered one of the major etiological factors preventing normal removal of peritoneal fluid (Sloss and Duffy, 1980). In full-term pregnancies, severe fetal ascites can markedly enlarge the fetal abdomen, thereby causing dystocia by obstructing normal passage through the birth canal (Arthur *et al.*, 1986; Rajasundaram *et al.*, 1998). Although such cases have been documented in bovines, reports in buffaloes are comparatively rare (Palanisamy *et al.*, 2007; Sheetal *et al.*, 2017; Kumar *et al.*, 2024). The present paper describes a case of dystocia due to fetal ascites in a Murrah buffalo and its successful obstetrical management.

CASE HISTORY AND OBSERVATIONS

An 8-year-old pluriparous full-term pregnant Murrah buffalo was presented to the Veterinary Clinical Complex, Bihar Veterinary College, Bihar Animal Sciences University, Patna, Bihar, India, with a history of active labour for the preceding 12 h. Clinical history revealed that the water bag had already ruptured, and fetal parts, including both forelimbs and the head, were protruding through the vulva. On general examination, the animal was active but showed signs of prolonged straining. Obstetrical examination revealed that the fetus was in anterior longitudinal presentation, dorso-sacral position, with both forelimbs and head extended. Previous attempts by local veterinarians to deliver the fetus through manual traction on the forelimbs and head were unsuccessful. Detailed per-vaginal examination indicated an abnormally enlarged, tense fetal abdomen filled with fluid, which was obstructing further passage of the fetus through the birth canal. Based on the clinical findings, the case was diagnosed as dystocia due to fetal ascites.

TREATMENT AND DISCUSSION

Epidural anaesthesia was induced using 2% lignocaine hydrochloride to facilitate obstetrical manipulation. As the

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fetus was in anterior longitudinal presentation with both forelimbs and head already protruding outside the birth canal, fetotomy was planned to reduce the enlarged fetal abdominal size. A controlled incision was made on the fetal abdomen using a B.P. blade, allowing the release of a large quantity of ascitic fluid through the birth canal (Fig. 1). Following decompression of the distended abdomen, the dead male ascitic fetus (Fig. 2) was successfully delivered per vaginum by gentle traction. The fetus was relatively small in overall body size but exhibited marked abdominal distension due to excessive fluid accumulation.



Fig. 1: Puncture of the acetic fetal abdomen per-vaginally



Fig. 2: Acetic male fetus removed after traction

Dystocia due to fetal ascites is an occasional dropsical condition reported in many species, but it is more frequently encountered in cows (Honparkhe *et al.*, 2003). Fetal ascites has been associated with conditions such as uterine dropsy, mesothelioma of the fetal abdomen, and infectious diseases like brucellosis (Roberts, 1971). According to Arthur *et al.* (1986), fetal ascites may also result from hepatic lesions, generalized venous congestion, or urinary tract obstruction with or without rupture of the fetal bladder. Cases of fetal ascites causing dystocia with anterior presentation have been reported in buffaloes (Palanisamy *et al.*, 2007; Sheetal *et al.*, 2017), while posterior presentations have also been documented in buffaloes (Selvaraju *et al.*, 2009; Prasad *et al.*, 2011; Kumar *et al.*, 2024) and in Holstein Friesian cows (Kumaresan *et al.*, 2013). Sagar *et al.* (2010) reported dystocia in a graded Murrah buffalo due to multiple congenital anomalies including fetal ascites, wry neck, and arthrogryposis. Placental dysfunction resulting from maternal-fetal incompatibility may also predispose the fetus to dropsical conditions.

Following delivery, the dam received supportive post-obstetrical treatment consisting of intravenous dextrose normal saline (DNS) 2 liters, normal saline (NS) 3 liters, Ringer's lactate (RL) 2 liters, calcium borogluconate 450 mL, along with ceftriaxone 4.5 g and meloxicam 12 mL administered intramuscularly. The fetal membranes were removed promptly after delivery, and the buffalo recovered uneventfully without any postoperative complications.

In the present case, timely diagnosis and appropriate obstetrical intervention through fetal decompression and

per-vaginal delivery successfully relieved dystocia, thereby avoiding economic loss to the farmer as well as the stress, surgical risks, and postoperative complications associated with Caesarean section. Moreover, this approach likely offers better prospects for future fertility in the dam compared to surgical intervention. The buffalo was discharged from the clinic with appropriate postoperative care instructions and management advice.

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