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Fetal ascites in Bargur buffalo (*Bubalus bubalis*): A case report

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Abstract

Dystocia in bubaline species due to fetal origin is uncommon. However, cases were reported in different breeds of buffalo due to dropsical condition of fetus. The present communication reports a rare case of dystocia due to fetal ascites in Bargur buffalo. The anteriorly presented ascites buffalo calf was removed by obstetrical mutation and forced extraction. The buffalo cow was recovered eventually. This case report was in the record as this was first report in Bargur buffalo species.

Keywords: Bargur buffalo, *Bubalus bubalis*, fetal ascites, dystocia, anterior presentation

Introduction

Excessive accumulation of fluid in the body cavities or interstitial tissue spaces is called as oedema or dropsy (Vegad, 2002) [22]. Different types of dropsical condition such as hydrocephalus (Fetal head), hydro-peritoneum or ascites (Fetal peritoneum) and anasarca (Subcutaneous tissues) were reported in bovine and bubaline species; which leads to dystocia due to higher fetal diameter (Noakes *et al.*, 2009) [9]. Among the dropsical conditions, dystocia due to fetal ascites is very rare. Ascites is also observed mainly in calf (Roberts, 1971; Craig, 2000) [14, 3]. Ascites in foetus is due to infectious as well as non-infectious fetal origin (Youngquist and Threlfall, 2007) [23]. The etiologies of fetal ascites are either excessive production or improper drainage of abdominal fluid (Sloss and Dufty, 1980; Sheetal *et al.*, 2017) [20, 18], or blockage of lymphatic system may prevent drainage of peritoneal liquid (Sloss and Dufty, 1980) [20] or significantly reduced the urinary disposal of water/fluid (Jubb and Kennedy, 1970) [6]. Generally, the ascitic foetus is comparatively small, however, due to distended abdomen in foetus which induces pressure (Anusha and Mouli Krishna, 2017) [1]; therefore, the fetal abdomen become jammed in the pelvic inlet (Singh *et al.*, 2010) [24] and not possible to palpate the structures through per-vaginum (Singh *et al.*, 2007) [19]. Thus, the fetal ascites triggers dystocia due to higher bulky fetes in bovine species (Kris nakumar *et al.*, 2012) [7]; however, dystocia due to ascites is rarely observed in bubaline species (Sheetal *et al.*, 2017; Sathya *et al.*, 2018) [18, 16]. Fetal ascites causing dystocia was reported in indigenous cows (Hoparkhe *et al.*, 2003) [4], Murrah buffaloes and graded Murrah buffaloes (Sheetal *et al.*, 2017) [18]. In mild fetal ascites, the abnormal foetus is deliver with mild manipulation and force extraction after use of sufficient lubricant. Draining of the ascites fluid from fetal abdomen with use of scalpel blade or catheter leads to reduction in size of the foetus (Abdominocentesis), which in turn help to track the abnormal foetus through per-vaginum, however, sometime, caesarean section is referred to relieve the dystocia (Jackson, 2004) [5]. The present communication reports a rare case of dystocia due to fetal ascites in Bargur buffalo. This case report was in the record as this was first report in Bargur buffalo breed. The present study reported a case of dystocia due to fetal ascites in a Bargur buffalo which was relieved through prevaginal delivery.

Case history and clinical observation

An 8-year-old Bargur buffalo was presented to TANUVAS-Bargur Cattle Research Station, Bargur with a history of prolonged second stage labour and the animal was straining for the last 6 h after rupture of water bag without showing any progress in parturition. Animal was straining forcefully; however, no progress was observed in delivery of the foetus. Clinical assessment revealed that the animal had normal temperature, little higher heart rate, respiratory rate, pulse rate and laboured breathing.

Trans-vaginal examination revealed that edematous dilated birth passage, cervix was fully relaxed and dilated, fetal was in anterior presentation, dorso-sacral position, head and both forelimbs were hanging from the birth canal, abnormally large distended fetal abdomen with large amount of fluid which in turn created pressure above the pelvic brim hinders the normal delivery of foetus. Thus, based on the history and clinical examination, it was diagnosed that the Bargur buffalo suffered dystocia due to fetal ascites (Figure 1) with anterior longitudinal presented foetus with fore-limbs and head extended through birth canal.

Treatment

Epidural anaesthesia (inj. 2% lignocaine hydrochloride) was administered to prevent the straining. After the proper restraining of the animals, the birth passage was lubricated using the lubricant and the fetal abdomen was accessed per vaginally. Then the dead female foetus delivered per vaginum by force extraction and fetal membranes removed manually following delivery of foetus. Post obstetrically, the dam was administered with injection Strepto-penicillin (5g) and, Injection – Meloxicam malate (10 ml;) intramuscularly for three consecutive days. The dam recovered eventually after the treatment.

Discussion

Incidence of dystocia due to dropsical condition such as fetal ascites was reported as 6.9% (Srinivas *et al.*, 2007) [21]. The etiologies for fetal ascites are not fully demonstrated; however, it may be due to hereditary predisposition, mesothelioma of fetal abdomen, uterine dropsy and brucellosis (Roberts, 1971) [14]; improper or defective fetal circulation and diseases in uterus (Sane *et al.*, 1994) [15]; excessive- production or improper flow of peritoneal fluid or dysfunction of placenta (Selvaraju *et al.*, 2009) [17], blockage of lymphatic system (Sloss and Dufty, 1980) [20]; liver diseases, general venous congestion, high pressure and blockage of urinary track with or without bladder rupture (Arthur *et al.*, 1996) [2], cyst in the kidneys with reduced excretion of urine (Jubb and Kennedy, 1970; Purohit *et al.*, 2012) [6, 12], salt and water retention in the urinary system due to diseases in kidneys (Sathya *et al.*, 2018) [16]. Fetal dystocia due to fetal ascites in anterior (Palanisamy *et al.*, 2007) [10] or posterior (Prasad *et al.*, 2011) [11] presentation was reported in bubaline species and posterior presentation in bovine species (Kumaresan *et al.*, 2013) [8]. Various authors reported that ascitic foetus was delivered through per-vaginum where foetus was presented in posterior presentation (Selvaraju *et al.*, 2009 and Kumaresan *et al.*, 2013) [17, 8]. This case report is confirmation with Selvaraju *et al.* (2009) [17] and Kumaresan *et al.* (2013) [8]. Similar approach was applied to relieve the dystocia due to foetal ascites by many authors (Selvaraju *et al.*, 2009; Ravikumar *et al.*, 2013) [17, 13]. In our study, the case was diagnosed correctly as fetal dystocia due to fetal ascites in anterior presentation and removed by obstetrical mutation and forced extraction, which avoided the stress as well as the post-operative complications in the caesarean section. Further, future fertility of the affected buffalo was secured. The buffalo was recovered eventually without any adverse effect on health, production and reproduction performances. Therefore, this can be concluded that the buffalo suffered dystocia due to fetal ascites and well managed by proper obstetrical mutation and forced extraction.

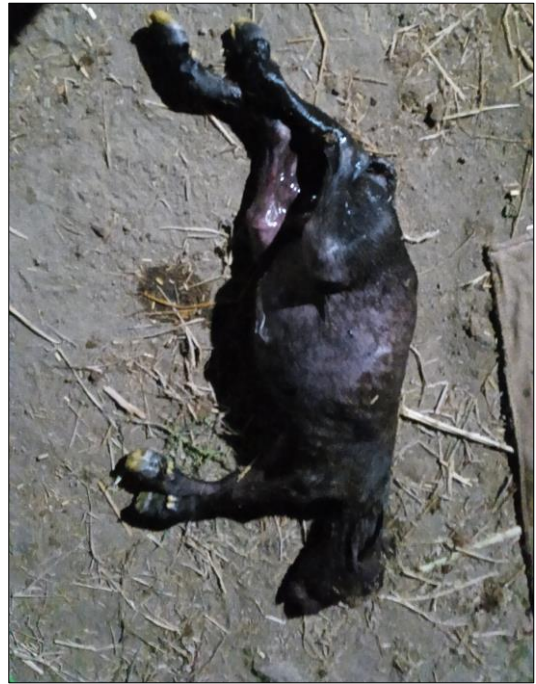


Fig 1: Bargur Buffalo ascites calve with abdominal fluid

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