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Clinical Article

A RARE CASE OF DYSTOCIA DUE TO CONGENITAL CERVICAL BRONCHOGENIC CYST IN A MURRAH BUFFALO

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SUMMARY

The present case study reports a rare case of dystocia due to fetal congenital cervical bronchogenic cyst in a primiparous Murrah buffalo brought to Veterinary Clinical Complex. The dystocia was relieved by puncturing the cyst of the dead fetus presented in posterior presentation using fetotome knife followed by traction.

Keywords: Bronchogenic cyst, Cervical, Congenital, Dystocia, Murrah buffalo

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The congenital abnormalities of fetus with structure and function are present at birth are relatively less frequent in bovines. The incidence of congenital defects in calves ranges from 2 to 3.5% (Aiello, 2000). Developmental or congenital abnormalities, defects and anomalies include functional as well as morphological imperfections. Congenital defects may be compatible with life but are lethal and thus account for an important part of neonatal mortality. Most of the congenital defects observed include musculoskeletal defects, gastrointestinal defects, craniofacial abnormalities, disorders of sexual development etc. Bronchogenic cysts are congenital cystic lesions resulting from the abnormal development of the tracheobronchial system during the embryonic period (Mehta *et al.*, 2004). Bronchogenic cysts can be intrathoracic or extra-thoracic. Extrathoracic cysts may be found in the suprasternal notch, next to the manubrium, in the shoulder, the neck, at the base of the tongue, the infraclavicular or the chin mental region.

Dystocia comes from the Greek word dys (difficult) and tokos (birth). The consequences of dystocia are numerous, ranging from increased stillbirths and perinatal mortality to severe trauma to the offspring or its mother. Moreover, dystocia affects both the welfare of the dam and offspring. Also, it results in an increased chance of sterility in the dam, increased likelihood of puerperal diseases in the dam, and subsequent culling of the dam and also increased mortality rate of the dam. Furthermore, dystocia reduced productivity of the dam and reduced subsequent fertility (Abera, 2017). The present case study puts on record a rare case of dystocia due to congenital cervical bronchogenic cyst in a fetus in primiparous Murrah buffalo.

A primiparous Murrah buffalo aged 4 years was brought to Veterinary Clinical Complex, Lala Lajpat Rai University of Veterinary and Animal Sciences, Hisar with the history of dystocia for last fifteen hours. The hindlimbs of dead foetus were projecting upto vulvar lips of the dam and excessive traction was applied by field paraveterinarian personnel but all efforts were in vain. On clinical examination of the animal, it exhibited normal temperature (101.3 ºF) and normal heart rate (78 beats/min). After epidural anaesthesia with 5ml of 2% lignocaine HCl and proper lubrication of reproductive tract with liquid paraffin, a detailed per-vaginal examination was carried out. It revealed the presence of two fetal forelimbs in the birth canal and head was inapproachable. The foetus was present in posterior presentation, dorso-sacral positionand an obstruction was felt in the form of large out pocketing structure on the ventral side of the neck. With the help of fetotome knife a blunt incision was given in the swollen part which led to oozing out of reddish coloured fluidand after mild traction the male foetus was successfully delivered (Fig. 1).

The dam was administered with Inj. Evatocin® (Oxytocin; Neon laboratories) 50 IU in 1 litre of normal saline IV, Inj. Metrogyl® (JB Chemicals; Metronidazole 4500 mg/900 ml) IV, Inj. Gardplus® (Cefoperazone plus sulbactum; Virbac Animal Health India Pvt. Ltd.) 4.5g IM, Inj. Megludyne® (Flunixin meglumine; Virbac Animal Health India Pvt. Ltd.) 20 ml IM, Inj. Avilin® (Pheniramine maleate; MSD Animal Health) 10 ml IM, Inj. Ergovet® (Methyl-ergometrine maleate; Carus Laboratories Pvt. Ltd.) 10 mL IM, Inj. Mifex® (Calcium-magnesium-boro-gluconate; Novartis India Limited) 450 ml slow IV and Inj. Dextrose Normal Saline (Dextrose 5%; Fresenius Kabi) 5 litresvia intravenous route. The antibiotics, anti-inflammatory and antihistaminic drugs were advised for next four days. The dam recovered without any post-partum complication.

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Fig. 1. The dead fetus delivered pervaginally

Fig. 2. Slit opening in the trachea

Post-mortem examination of the fetus revealed normal thyroid glands, heart, kidneys, liver, spleen and alimentary canal. Upon exploring the outpocketing structure *i.e.* cystic enlargement, an opening was observed towards the teachea which was further traced in to the trachea as a slit opening (Fig. 2). The lungs were edematous. Therefore, the condition was diagnosed to be congenital cervical bronchogenic cyst.

Congenital malformations/anomalies represent a hidden danger for animal production, above all when genetic selection is undertaken for production improvements. Many of these anomalies in the bovine population have been associated with genetic factors (transgenes, chromosomes), environmental agents (infections, toxins, fertilization techniques, management), or a combination of factors (Newman *et al.*,1999). These malformations are responsible for economic losses either because they reduce the productivity of the farm, or because their spread in the population would decrease the total productivity of that species/breed (Albarella *et al.*, 2017; Singh *et al.*, 2019).

Extrathoracic bronchogenic cysts are characteristically present with asymptomatic neck mass, often located in the anterior neck just above the sternal notch (Muramatsu *et al.*, 1990). Although various clinical and pathologic studies of bronchogenic cysts in humans exist, extrathoracic bronchogenic cysts have yet to be reported well in animals. Although, a case of extrathoracic bronchogenic cyst in cattle calf has been reported (Lee *et al.*, 2010). To best of our knowledge, no report concerning congenital cervical bronchogenic cyst in buffaloes is available in literature. The animal owner must be well trained to intervene appropriately in dystocia and recognize when to call the veterinarian.

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