

Dystocia Due to Breech Presentation with Cranio -Skeletal Malformations in A Cross Bred Cow

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Abstract

A third calving full term pregnant Jersey cross bred cattle was presented to Veterinary Poly Clinic with the history of calving difficulty. All the vital sign parameters of the Dam were within the normal limits. The animal is on sternal recumbency. Upon vaginal examination, it was found that the cervix was fully dilated. Additionally, a breech presentation was observed. Detailed vaginal examination and manipulations the calf was brought to extended position of hind legs. Then by careful assistance hind limb was dragged outside but the hip and thigh region of the calf were locked at the pelvic brim of the dam, making delivery difficult. Despite ample lubrication, a bulldog calf with cranio-skeletal malformations was delivered. These malformations are attributed to hereditary causes, primarily driven by recessive autosomal genes. The communication highlights the importance of understanding genetic predispositions and conducting thorough examinations during pregnancy to detect such anomalies early. It also emphasizes the need for careful breeding practices to minimize the risk of inherited disorders in livestock populations.

Keywords: Bull dog, Congenital, Cranio skeletal malformation, Dystocia

Introduction

Reproduction plays a crucial role in cattle production and directly impacting profitability. Dystocia poses a significant challenge in cattle production (Rao, 1989). Recently, there has been a rise in the proportion of dairy calves requiring assistance at birth, resulting in a notable increase in the number of calves being born either weak or dying within 48 hours of birth due to challenging deliveries or dystocia (Mee, 2008). Congenital anomalies are one of the major causes of dystocia in cows. Among Various kinds of anomalies or monstrous, cranio skeletal malformations are rare condition in domestic animals (Sara Albarella *et al*, 2017). Bulldog anomalies are uncommon and rarely reported in bovines (Prabhakaran *et al*, 2013). It is a congenital defect in newborn calves, featuring craniofacial and skeletal malformations resembling a bulldog appearance of calf. These include shortened or flattened skulls, facial deformities and skeletal issues in limbs and spine, impacting calf health and survival. Factors contributing to these conditions may involve genetics, environment, or a combination thereof. The present case study reports the rare case of Bull dog with incomplete cranial bones development in a calf.

Clinical observation and treatment

A Third calving crossbred jersey cow was referred to to Veterinary Polyclinic, Udumalai by a field veterinarian with a history of unable to expel the

foetus for more than 10 hours. Per vaginal examination revealed that the foetus had posterior presentation and complete breach position with both hind limbs extended (Hinnenberg *et al.*, 2019 and Schlaeger *et al.*, 2018). After conducting a thorough vaginal examination, 4 ml of 2% Lignocaine was administered epidurally and traction was applied to the hind limbs of the fetus. Both hind limbs were carefully pulled out through the vagina. However, the hip joint and thigh region of the calf was locked at the pelvic brim of the dam, complicating the delivery process. The vaginal passage was then lubricated with liquid paraffin and the pelvic part of the fetus was extracted with forced traction without complications. Examination of the fetus revealed cranial bone malformations, including the absence of nasal bones and nostrils, incomplete growth of eye orbits and incomplete development of maxillary bones, resulting in a protruded tongue and abnormal hard palate formation (Fig. 1). Further to address the dam condition, rehydration fluids were administered, including inj. Dextrose Normal saline 1 lit IV, inj. Ringer's Lactate 1 lit IV and inj. Calcium Magnesium Borogluconate 450 ml IV and additionally, the dam received treatment consisting of inj. Meloxicam (@0.3 mg/kg, IM), inj. Ceftriaxone (@15 mg/kg, IM) and inj. Pheneramine malate (@0.5 mg/kg, IM) for three days.

Discussion

Congenital malformation is defined as a defect of morphogenesis, which developed during intrauterine

life, and is observed at birth (Tomasz *et al.*, 2020). The present communication reported the one of major anomalies in Bovines. Prevalence of Congenital malformation was about 2-3 percent globally (Giovanni and Mario, 2012). The Bull dog calf was reported in India (Kumar *et al.*, 2007; Bhattacharya *et al.*, 2012). But the present case was reported that the bulldog calf with absence of nasal cavity and bifurcation of maxilla. Artificial insemination in bovines is the major drive to increase the bovine population. Studies on congenital malformations inevitable to reduce the risk of farmers livelihood. The present communication reported that calf had Cranio skeletal malformation without nasal cavity.



Fig. 1 cranial bone malformations in a calf

Conclusion

This communication reported the foetal anomalies in crossbred cows.

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Reference

- Giovanni Corsello and Mario Giuffre. (2012). Congenital malformations. *J Matern Fetal Neonatal Med.*, Suppl 1:25-9.
- Hinnenberg, P., Toijonen, A., Gissler, M., Heinonen, S. and Macharey, G. (2019). Outcome of small for gestational age-fetuses in breech presentation at term according to mode of delivery: a nationwide, population-based record linkage study. *Arch Gynecol Obstet.*, 299(4):969-974.
- Mee, J. F. (2008). Prevalence and risk factors for dystocia in dairy cattle. *A review. Vet J.*, 176: 93–101.
- Prabaharan, V., Jayakumar, K., Kathirvel, S., Selvaraju, M. and Dharmaceelan, S. (2013). Dystocia due to bull dog calf in a non-descript buffalo. *Shanlax International Journal of Veterinary Science*, 1(1): 43-44.
- Rao, R. A. (1989). Reproductive problems in cattle and buffaloes. In: Bhat P.N., Menon, K.K.G., Srivastava, H.C.(eds): *Animal productivity*. New Delhi, Oxford and IBH publishing co. pvt. ltd., pp: 225-231.
- Sara Albarella, Francesca Ciotola, Emanuele D'Anza, Angelo Coletta, Luigi Zicarelli and Vincenzo Peretti. (2017). Congenital Malformations in River Buffalo (*Bubalus bubalis*). *Animals.*, 7: 9. doi:10.3390/ani7020009
- Schlaeger, J. M., Stoffel, C. L., Bussell, J. L., Cai, H. Y., Takayama, M., Yajima, H. and Takakura, N. (2018). Moxibustion for Cephalic Version of Breech Presentation. *J Midwifery Womens Health.*, 63(3):309-322.
- Tomasz Uzar., Izabela Szczerbal., Katarzyna Serwanska-Leja., Joanna Nowacka-Woszek., Maciej Gogulski., Szymon Bugaj., Marek Switonski. and Marcin Komosa. (2020). *Animals (Basel).*, 10(9): 1615