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DYSTOCIA DUE TO GIANT FETAL HYDROCEPHALUS IN A CROSSBRED JERSEY COW

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Abstract: A 6 year old full term pregnant Jersey crossbred cow presented with the history of straining for past 10 hours with ruptured water bag with no progress in parturition. Based on obstetrical examinations the case was diagnosed as dystocia due to fetal hydrocephalus. Successful per vaginal delivery of the foetus was reported in this communication.
Keywords: Cow, Giant, Fetal hydrocephalus, Pervaginal delivery, Williams long obstetrical hook, Cranial puncture

INTRODUCTION

Hydrocephalus is an infrequent congenital anomaly in mammals, characterized by the abnormal accumulation of cerebrospinal fluid (CSF) within the cerebral ventricles or subarachnoid space resulting in cranial distension and in advanced cases, marked thinning of the cranial vault (Purohit *et al*., 2006). The condition arises from impaired CSF circulation or reabsorption and has been documented across multiple species, with a higher reported incidence in swine, canines, and bovines (Noakes *et al*., 2009). In veterinary obstetrics, fetal hydrocephalus represents a recognized though uncommon cause of obstructive dystocia due to disproportionate fetal cranial dimensions (Murugan *et al*., 2014). This case report describes the successful obstetric management of dystocia due to hydrocephalic fetus in a Jersey crossbred cow.

CASE HISTORY AND CLINICAL OBSERVATIONS

A six-year-old full term pregnant crossbred Jersey cow on its fourth parity was presented to large animal obstetrics unit, Veterinary Clinical Complex, Veterinary College and Research Institute, Salem with the history of constant straining noticed for past 10 hours with waterbag and no further progress in parturition. The both forelimbs of the foetus extended into

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the vulva but application of traction by the owner was futile. Under low caudal epidural anesthesia of 4 ml of 2% Lignocaine hydrochloride, per vaginal examination revealed that cervix was fully dilated and the fetus was found to be at anterior longitudinal presentation, dorso-sacral position with left lateral deviation of head with abnormally enlarged with fluid feeling on palpation and both the fore limbs extended in the birth canal. Hence this case was diagnosed us dystocia due to fetal hydrocephalus.

TREATMENT AND DISCUSSION

To remove the fluid, the enlarged part of the foetal head was punctured by using the obstetrical sharp hook. Following sufficient lubrication of birth canal attempts were made to deliver the fetus by forced traction and a dead male fetal monster was delivered per-vaginally. Radiographic examination fetus reveled enlarged dome shaped skull with gaping between internal cephalic structure and frontal bone. The cow was treated with Inj. Ringer's Lactate (10 ml/kg B/W I/V), Inj. calcium borogluconate (300 ml slow I/V), streptopenicillin (10 mg/kg BW I/M), meloxicam (0.2 mg/kg BW I/M), chlorpheniramine maleate (0.5 mg/kg BW I/M) and 30 IU of oxytocin intramuscularly. The cow had an uneventful recovery.

		
Hydrocephalus foetus	**Dome shaped head**	**Radiograph of skull**

Hydrocephalus is a dropsical condition with accumulation of fluid as a result of an imbalance between the formation and drainage of cerebrospinal fluid (CSF) either in ventricular system or subarachnoid space characterized by marked enlargement of cranium (Noakes *et al*., 2009). In cattle congenital hydrocephalus may be caused by simple autosomal recessive gene with incomplete penetrance. Acquired Hydrocephalus can also happen due to infection, trauma or because of nutritional causes (Shamra *et al*., 2019). The affected animals are either born dead or die shortly after birth. Severe form of hydrocephalus results in dystocia and that cannot be relieved by mutation and forced traction. The excessive bony enlargement of cranium may require fetotomy (Purohit *et al*., 2012). The present case also giant

hydrocephalus fetus delivered by puncturing the cranium and delivered the fetus pervaginum. The swelling over the head and on cutting out, it was found to be in the sub arachnoid space; hence the case was confirmed as external hydrocephalus.

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CONCLUSION

A case of dystocia in crossbred Jersey cow due to giant fetal hydrocephalus was successfully treated and reported.

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