

CASE REPORT

Congenital Hydrocephalic Monster in an Indigenous Gir Calf: A Case Report

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There are several types of fetal dropsy (fetal ascites, fetal anasarca, fetal hydrocephalus), which have obstetrical importance preventing normal easy delivery of calf. Hydrocephalus is one of the fetal causes of dystocia. It is characterized by an accumulation of fluid which may be in the ventricular system or between the brain and the subarachnoid space. The swelling or enlargement of cranium occurs as a result of an imbalance between formation and drainage of cerebrospinal fluid (Arthur *et al.*, 2001). This congenital dropsical condition is associated with an autosomal recessive gene, whereas some cases are due to BVD-MD or bluetongue virus infection in bovine (Roberts, 1986). Though this dropsical condition is rare in Gir cattle, it is reported in many other species (Dhami *et al.*, 2007; Kumar *et al.*, 2010; Parmar *et al.*, 2018). The present case report depicts an unusual instance of hydrocephalic monster in an indigenous Gir calf, causing dystocia, which was successfully managed by per vaginam.

ANAMNESIS AND GYNECO-CLINICAL OBSERVATIONS

An 8-year old full-term pluriparous Gir cow was presented at VCC of the College in Junagadh with complaints of dystocia. The animal was restless with continuous abdominal straining since mid night, but failed to deliver a calf. The local veterinarian attempted to deliver the calf but was futile, and the case was referred to VCC. The per vaginam gynecological examination revealed a completely dilated birth canal with superficial laceration of the vaginal wall. Water bags had ruptured. The calf was in anterior longitudinal presentation. Both the forelimbs were occupied in the birth canal, while palpation of the fetal head revealed abnormally fluid-filled enlarged cranium denoting hydrocephalic monstrosity (Fig. 1). Foetus was dead as evinced by the absence of vital reflexes. Further, the lower mandibular part was damaged by earlier attempts to relieve the condition. Physiological parameters of dam were within the normal range.

OBSTETRICAL MANAGEMENT AND DISCUSSION

Posterior epidural anesthesia was induced using 2% lignocaine HCl, at first inter-coccygeal space. 10 mL isoxsuprine

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hydrochloride (Duvadilan, Abbott Health Care Pvt Ltd.) was given i/m for easy exploration of birth canal. Perineal region was rinsed with PP lotion, and birth canal was lubricated using copious quantity of sodium carboxy methylcellulose (CBC) gel. A large loop of cotton snare was placed behind both the ears and the lower mandible as well as both the forelimbs engaged into the birth canal were tied with another cotton snare for traction. The operator gave slight direction on forehead towards the birth canal to bring it into the birth canal, and a dead fetus was delivered by forced traction. Clinico-medical management involved administration of i/v drip of 5 liters of Inj. DNS, 80 mL of Inj. Oxytetracycline and 10 mL of Inj. Dexamethasone, while 10 mL of Inj. B-complex, 10 mL of Inj. Adrenochrome (Adchrome) and 10 mL of Inj. Pheniramine maleate were given i/m. Moreover, uterine cleanser, Liq. Exapar (Ayurved) @ 50 mL OD PO was given for 5 day. The animal made an uneventful recovery on follow up 3 days later.

Hydrocephalus is not a common obstetrical condition in indigenous Gir cattle which accounts for foetal cause of dystocia. It can be managed by slight to moderate traction if cranial swelling is mild. In severe forms of hydrocephalus where



Fig. 1: Hydrocephalic Gir calf

excess cerebrospinal fluid is accumulated, marked thinning of the cranial bones takes place which facilitates trocarisation of the skull enabling vaginal delivery of calf. After applying ample quantity of lubrication and protecting the birth canal from laceration, the diameter of hydrocephalic fetuses may be reduced by appropriate multiple or single incisions with a fetotomy knife (Dhami *et al.*, 2007; Malik *et al.*, 2017). Where this cannot be done, the dome of the cranium may be sawn off (cephalotomy) with fetotomy wire or a giggly wire saw (Arthur *et al.*, 2001). However, Cesarean section is indicated in the severe form of hydrocephalus with multiple fetal abnormalities

(Parmar *et al.*, 2018). In the present case, enlargement of the cranium prevented the spontaneous delivery of fetus per vaginam, which was delivered by mutation and forced traction.

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