

Dystocia Due to Fetal Hydrocephalus in a Jersey Crossbred Heifer – A Case Report

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There are several forms of the congenital deformity in the bovine fetus. Among them, congenital hydrocephalus has been described in cattle (Balasubramanian *et al.*, 1997) and buffalo (Pandey *et al.*, 2010). The condition results in dystocia and the fetuses are delivered by either excision of the head followed by traction (Bhandari *et al.*, 1978) or caesarean section (Balasubramanian *et al.*, 1997). Hence, a case of dystocia due to fetal hydrocephalus in a Jersey crossbred cow is reported.

Case History and Observation

A full term Jersey crossbred heifer was presented to the Veterinary College and Research Institute Teaching Hospital, Namakkal with a history of difficulty in parturition for past 6 hrs. The water bags have ruptured 4 hours before and attempts made to deliver the fetus by a local veterinarian failed. Per vaginal examination revealed that the fully dilated cervix and the fetus was in anterior longitudinal presentation with both forelimbs present at the vulva. Careful examination of the fetus revealed the enlarged fetal head and the case was diagnosed as fetal hydrocephalus.

Treatment and Discussion

To abolish straining, 5 ml of 2% lignocaine hydrochloride in to the sacro-coccygeal space was given. The enlarged head was excised with sharp fetotomy knife to release a large quantity of watery fluid and then the fetus was delivered per vaginum with careful gentle traction after proper lubrication (Fig). The dam recovered uneventfully after intravenous fluid and antibiotic therapy. The sac of fluid was hanging over the head and on excision, it was found to be in the sub arachnoids space, hence the case was external hydrocephalus.

Hydrocephalus is assumed to arise from disturbances in normal circulation of cerebrospinal fluid resulting from its altered production or absorption (Fride, 1975). A simple autosomal recessive gene (Roberts, 1986) have been reported to be linked with hydrocephalus in cattle. Jubb and Kennedy (1970) stated that congenital hydrocephalus was known to be inherited in cattle and exacerbated in its manifestation by a coexisting hypovitaminosis.

A compression of the brain occurs in calves with hypovitaminosis A due to failure of growth and sculpturing of the cranial vault to accommodate the growing

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brain. Sastry, (1971) suggested that external hydrocephalus resulted from either too much fluid formed and not rapidly drained by the arachnoid villi or due to hindrance to the drainage of normally produced fluid. Congenital external hydrocephalus in the form of water sac over the forehead and face was quite rare in animals (Jubb and Kennedy, 1970). The enlarged head cannot easily pass through the birth canal and results in dystocia as was seen in the present case, although sometimes the fetus may be delivered normally and presented later for therapy of the calf (Mouli, 1987).

Summary

The successful per vaginum delivery of the hydrocephalus fetus in a Jersey crossbred cow is reported.

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