SURGICAL CORRECTION OF DYSTOCIA DUE TO HYDROCEPHALOUS FOETUS WITH EMPHYSEMA

N. VENKATA KRISHNA*[1] AND K. VEERA BRAMHAIAH[2]

Veterinary Gynaecology & Obstetrics, College of Veterinary Science,
Sri Venkateswara Veterinary Science, Tirupati-517502, Andhra Pradesh.

Received:03-11-2022 Accepted:14-11-2022

ABSTRACT

The foetal abnormalities are one of the protagonists causes for causing parturient related issues ultimately resulting in dystocia. Several congenital deformities observed in cattle and buffaloes among those hydrocephalus, bulldog calf conditions are common. Pregnant cross breed Jersey cow aged 5 years presented to Teaching Veterinary Clinical Complex, College of Veterinary Science Tirupati with difficulty in parturition. Animal was showing symptoms of parturition since 12 hrs and treated by local veterinarian. On per vaginal examination cervix was fully opened and the foetus could not be delivered through birth canal and on detailed examination it revealed a marked enlargement of cranial part of the head with emphysematous body. Based on this clinical and obstetrical examination the case was diagnosed as dystocia due to foetal hydrocephalous.

Key words: Hydrocephalus, foetus, dystocia and emphysematous body.

INTRODUCTION

Hydrocephalous anomaly is an accumulation of excessive fluid in the subarachnoid space and ventricular system of brain there by leading to swelling of cranium (Arthur et al., 2001 and Noakes et al., 2009). Congenital hydrocephalus is present at birth and may be caused by either environmental influence during foetal development or genetic predisposition. In cattle congenital hydrocephalus may be caused by simple autosomal recessive dominant gene with incomplete penetrance (Purohit et al., 2012). It is assumed that hydrocephalus may be arise from disfunction in normal blood supply of the cerebrospinal fluid leads to change in production and absorption (Saini et al., 2019). Hydrocephalus may cause increased intracranial cerebral pressure, progressive enlargement of the head, convulsions, mental disability, and even death. Calves with pronounced enlargement die within 48 h but less severely affected calves may survive (Leech et al., 1978). This report describes a case of enlarged hydrocephalic foetus and its successful delivery in cross breed HF cow by caesarean section.

HISTORY AND CLINICAL OBSERVATIONS

Approximately 10 months pregnant cross breed Jersey cow aged 5 years was presented to Teaching Veterinary Clinical Complex, College of Veterinary Science Tirupati. Animal was showing parturition symptoms from before one day and the cow was treated by local veterinarian and referred to TVCC for further relief. During per vaginal examination cervix was fully opened and the foetus was in anterior longitudinal presentation with both limbs protruded out from vagina. But there was difficulty in delivering the calf through birth canal because of marked enlargement of cranial head and emphysematous body. Foetal movements and suckling reflexes were absent.

TREATMENT AND DISCUSSION

Immediately after admission cow was examined per vaginally explored the possibility of delivery through birth canal. But due to presence of anomalous condition hydrocephalous and foetal emphysema it was decided to deliver the foetus by caesarean section. The cow was restrained in right lateral recumbency and prepared the operation site aseptically for para median incision parallel and approximately 5 cm lateral to the linea alba. Approximately 40 ml of 2% lignocaine was administered locally to anaesthetize the area. Incision was made to explore the gravid uterus and fetus. After exploring the uterus the dead foetus was removed along with placenta. Peritoneal cavity and surgical site were cleaned with metronidazole and normal saline. The uterus and incision site were sutured as per standard technique. The patient was kept under post-operative care with appropriate antibiotic, anti-inflammatory, fluid therapy and antiseptic dressing of the incision daily for five days. The sutures were removed on 12th post-operative day.

Dead foetus delivered was having football sized round head and the death of the foetus might be due to enlarged size pressure on vital centres of the brain (Saini et al., 2019). Further on detailed examination of fetus it revealed that absence of some portion of frontal bones of skull and the skull was in dome-shaped. These findings are similar to the observations of Mausumi *et al*. (2014). On excision of enlarged portion, fluid was found in subarachnoid space, indicating that it was external hydrocephalous condition. Similar findings were reported

*[1] Corresponding author and Research Scientist; [2]: Dean of Veterinary Science

by Ravikumar et al., (2013) and Sharma et al., (2015). In present case death of foetus might be due to hydrocephalous anomaly as well as delay in attending the case. Dam was recovered uneventfully after postoperative care.

Dead foetus with hydrocephalous condition

REFERENCES

Noakes, D.E., T.J. Parkinson and G.C.W. England. 2009. , 9ed. Saunders London, UK. p. 950.

Arthur, G.H., D.E. Noakes, T.J. Parkinson and G.C.W. England. 2001. *Veterinary Reproduction and Obstetrics*, 8th ed. WB Saunders company, Philadelphia, Pennsylvania, USA. p. 131-132.

Saini, R., Sharma, S.K., Aziz, P.R., Mir, L.A., & Pooniya, R. (2019). Congenital Hydrocephalus in a Calf and its Surgical Treatment: A Case Report. *Ind J Vet Sci and Biotech*, **15**(1):81-82.

Leech, R.W., C.N. Hauges and L.A. Christoferson. 1978. Hydrocephalus, congenital hydrocephalus, congenital internal hydrocephalus, aqueductal stenosis. ., (2): 567-570. PMC2018286/pdf/amjpathol00736-0251.

Purohit GN, Kumar P, Solanki K, Shekher C, Yadav SP (2012) Perspectives of fetal dystocia in cattle and buffalo. *Veterinary Science Development*, **2**(1): 8.

Ravikumar, K., Kumaresan, A., Selvaraju, M. and Sivaraman, S., 2013. Dystocia Due to Fetal Hydrocephalus in a Jersey Crossbred Heifer-A Case Report.

Sharma, S.K., Monika Joshi, Khosa, J.S. and Diler Singh (2015). An unusual case of dystocia due to hydrocephalic monster in a buffalo. *Intl. J. Sci. Environ. Technol*, **4**(2): 300-304.

Mausumi, N., Subhasis, N., Upadhyay, S. N., & Hazra, J. (2014). A case of congenital hydrocephalus in a calf and its successful recovery. *Exploratory Animal and Medical Research*, ***4***(2), 253-256.