

CLINICAL MANAGEMENT OF DYSTOCIA DUE TO DICEPHALIC FOETAL
MONSTER IN A JAFFARABADI BUFFALO - A CASE REPORT

Rupesh Raval*, Karsan Vala and Kiran Parmar

Received: 02 June 2020

Accepted: 21 March 2024

ABSTRACT

Jaffarabadi buffalo of 13 years of age at full term gestation were presented with a history of parturient signs and continuously straining for over 6 h, ruptured water bag and both the forelimb were in birth canal. Per vaginal examinations revealed complete cervical dilatation and presence of dead foetus in anterior presentation having double head and one head having enlarged forehead stuck in birth canal. Following diagnosis fetotomy was the performed under epidural anaesthesia relieve the condition.

Keywords: *Bubalus bubalis*, buffaloes, Jaffarabadi buffalo, dystocia, dicephalic monster, fetotomy

INTRODUCTION

Dystocia is a prevalent condition in bovines that results from obstacles caused by foetal monstrosities during calving. In crossbred cattle, dystocia due to dicephalus monster calf has previously been documented, along with effective management techniques (Nakhashi *et al.*, 2006; Nag *et al.*, 2015; Das *et al.*, 2018) and in buffaloes

(Raju *et al.*, 2000; Bugalia *et al.*, 2001; Srivastava *et al.*, 2008; Kumar *et al.*, 2014). In the present communication, dystocia due to Cephalodidymi (double head) in Jaffarabadi buffalo has been recorded perhaps for the first time. This paper describes a successful delivery of dead fetus by partial fetotomy.

CASE HISTORY AND CLINICAL FINDINGS

A primiparous Jaffrabadi buffalo aged about 13 years was presented to Veterinary Hospital with a history of parturient signs, recumbency and continuous straining for over 6 h, with the ruptured water bag, the two forelimbs were in the delivery canal (Figure 1). Vulva was oedematous and inflammatory. The mucous membrane of the vagina was dry and swollen. The animal's physiological parameters were normal at the time of presentation. Upon vaginal examination, a dead foetus with two heads separated from one another and an enlarged forehead lodged in the delivery canal was noticed along with complete cervical dilatation. The case was attended by local paravet with unsuccessful attempts to deliver the foetus

by traction. Based on history, clinical findings and per vaginal examination a tentative diagnosis of dystocia due to foetal monster (double head) was made (Figure 4).

TREATMENT AND DISCUSSION

The decision to perform a percutaneous partial fetotomy was made with consideration for the urgency and severity of the case within the tractor trolley in the recumbent position of the animal. Caudal epidural anaesthesia was induced by using 2% lignocaine hydrochloride (7 ml). After adequate lubrication and all aseptic precautions, the fetotome along with wire was introduced in the birth canal (Figure 2). The loose loop of fetotome wire was passed over the base of the head attachment and fetotome placed at lateral side of head as caudal as possible in order to remove the whole head. After taking all the precautions and comfortable placement cutting was started in a steady manner performing wide arm strokes until the head detached from the neck region. Then by using long embryotomy hook placed at the orbits of the detached head it was taken out by applying mild traction. Again, after adequate lubrication of birth canal same procedure of detachment was performed for another head. After thorough lubrication of the birth canal, the rest of the foetus along with foetal membranes was then pulled out by traction on both the extended forelimbs ensuring minimum damage to the birth canal (Figure 3) After relieving dystocia, six Furea bolus were placed in uterus and fluid therapy along with Inj. Dexona 5 ml, Inj. Oxytocin 50 IU slow IV was given to the dam. The buffalo had a smooth recovery following the treatment with parenteral fluid, antibiotic (Inj. Intacef 6 g), Antihistaminic

(Inj. Anistamin 10 ml) and Analgesic (Inj. Megludyne 20 ml) for three consecutive days.

According to Ottonari *et al.* (1993), dicephalus is a condition of embryonic duplication that affects the head either with or without the neck. About one in every one lac cows is born with dicephalus (Hancock, 1954). More often than caudal parts, the cranial portion of the fetus duplicates itself due to defective germinal area duplication, which results in partially or totally duplicated body components (Roberts, 1971). The double-headed calf represents an instance of an extreme fetal monster that results in dystocia. A fetotomy or cesarean section could be used to treat this problem (Sharma, 2006; Long, 2009). Several veterinarians have previously reported successful management (laparotomy/caesarean section) of dystocia in cattle caused by dicephalus monster calves (Nag *et al.*, 2015; Das *et al.*, 2018) and buffaloes (Bugalia *et al.*, 2001; Srivastava *et al.*, 2008; Kumar *et al.*, 2014). In the present case, two separate head attached to a single neck was noticed. One of the heads had enlarged forehead, while neck, thorax, abdomen, and limbs were grossly normal. Kumar *et al.* (2012, 2014) reported dicephalus buffalo calf monster conjoined at the base of the medial ears. Conjoined twins can result from a variety of causes, including genetic and environmental factors. These factors are currently thought to be the cause of twins that do not separate after the thirteenth day of fertilization (Srivastva *et al.*, 2008). In present report, the foetus was dead and two separate head were joined with single neck, the fetotomy technique, which is the safest and least time-consuming, was successfully used in place of a cesarean section to preserve the buffalo's life and future fertility. Kumar *et al.* (2012); Singh *et al.* (2018) also reported successful delivery of dicephalus monster calf through fetotomy in



Figure 1. Jaffarabadi buffalo having dystocia.



Figure 2. Placement of fetotome in birth canal and fetotomy procedure.



Figure 3. Showing cuts of fetotomy and the exteriorized foetus.



Figure 4. Dicephalus buffalo calf monster.

Murrah buffaloes. In the present report of dystocia due to dicephalus calf monster in a Jaffarabadi buffalo was successfully treated with a partial fetotomy and per vaginal extraction of the foetal parts, as well as effective medical management of the dam.

ACKNOWLEDGMENT

We thank Head of Teaching Veterinary Clinical Complex, and Principal and Dean, College of Veterinary Science and Animal JAU, Junagadh for the clinical facilities provided.

REFERENCES

- Bugalia, N.S., R.K. Biswas and R.D. Sharma. 2001. Diplopagus sternopagus monster in an Indian water buffalo (*Bubalus bubalis*). *Indian J. Anim. Reprod.*, **22**(2): 102-104.
- Das, S., S. Majumdar and C. Debbarma. 2018. Dystocia due to dicephalus monster calf and its surgical management in a crossbred Holstein heifer - A case report. *Indian J. Anim. Res.*, **52**(3): 477-478. DOI: 10.18805/ijar.v0iOF.7813
- Hancock, J. 1954. Monozygotic twins in cattle. *Adv. Genet.*, **6**: 141-181. DOI: 10.1016/S0065-2660(08)60129-7
- Kumar, M., A. Saxena, B. Krishnappa and R. Sagar. 2012. Extraction of a dicephalic monster in buffalo-Fetotomy: A case report. *Buffalo Bull.*, **31**(3): 102-104. Available on: https://kukrdb.lib.ku.ac.th/journal/index.php?/BuffaloBulletin/search_detail/result/286379
- Kumar, P., A. Sharma, M. Singh, P. Sood and P. Barman. 2014. Dystocia due to dicephalus monster fetus in a buffalo. *Buffalo Bull.*, **33**(1): 13-15. Available on: https://kukrdb.lib.ku.ac.th/journal/BuffaloBulletin/search_detail/result/286448
- Long, S. 2009. Abnormal development of the conceptus and its consequences. In Noakes, D.E., T.J. Parkinson and G.S.W. England (eds.) *Veterinary Reproduction and Obstetrics*, W.B. Saunders Co. Ltd., London, UK.
- Nag, B.S.P., U.S. Kalyaan, D. Gopikrishnan, B. Manicksunder, T. Sathiamoorthy and T. Sarath. 2015. Management of dystocia due to double headed monster in a crossbred Jersey cow. *Indian Journal of Animal Reproduction*, **36**(1): 73-74.
- Nakhashi, H.C., P.B. Patel, C.G. Chaudhary, S. Faruque, R. Pande and S.R. Chaudhary. 2006. Dystocia due to dicephalus monostomas in crossbred cow. *Indian Journal of Field Veterinarians*, **1**: 49-50.
- Otonari, S., M. Nakai, R. Yamaguchi, M. Hagio and T. Nasu. 1993. Five cases of cranial duplication in calf. *J. Vet. Med. Sci.*, **55**(3): 493-495. DOI: 10.1292/jvms.55.493
- Raju, K.G.S., K.S. Rao, V.S.C. Reddy and G.P. Sharma. 2000. Dicephalus-biatlanticus monster in a buffalo. *Indian Journal of Animal Reproduction*, **21**(1): 81.
- Roberts, S.J. 1971. *Veterinary Obstetrics and Genital Diseases*, 2nd ed. C.B.S. Publisher and Distributors, New Delhi, India. p. 70-73.
- Sharma, A. 2006. Caesarian section in animal under field conditions: A retrospective study of 50 cases. *Indian Vet. J.*, **83**(5): 544-545.
- Singh, G., R. Dutt, V. Yadav and S. Patil. 2018. Successful management of dystocia due to dicephalus fetal monster in a Murrah

buffalo. *International Journal of Science and Nature*, **9**(2): 258-259.

Srivastava, S., A. Kumar, S.K. Maurya, A. Singh and V.K. Singh. 2008. A dicephalus monster in Murrah buffalo. *Buffalo Bull.*, **27**(3): 231-232. Available on: https://kukrdb.lib.ku.ac.th/journal/BuffaloBulletin/search_detail/result/286185