Case Report

SUCCESSFUL PER-VAGINAL DELIVERY OF A RARE CASE OF ZIPHOPAGUS MONSTER BY EPISIOTOMY TECHNIQUE

S. Radhika[*1], B. Chandra Prasad[2] and M. Srinivas[3]

Department of Veterinary Gynaecology and Obstetrics
N.T.R. College of Veterinary Science
Sri Venkateswara Veterinary University
Gannavaram- 521 102, Andhra Pradesh, India

ABSTRACT

A pluriparous full-term pregnant buffalo was presented with a history of unproductive straining with improper relaxation of the vulva. Detailed obstetrical examination revealed the presence of two fetuses that were conjoined twins with attachment present at the sternal region of the thorax of the fetuses. The conjoined twins (Ziphopagus monster) were delivered per-vaginal by episiotomy technique.

Keywords: Buffalo, Conjoined twins, Ziphopagus monster, Episiotomy

Received : 20.12.2022 Revised : 23.02.2023 Accepted : 23.02.2023

Conjoined twins is a very rare incidence in buffaloes (Selvaraju *et al*., 2002). Usually, they occur at the time of primitive streak development due to the incomplete division of one embryo into two components (Noden and Lahunta, 1984). Such abnormal embryonic duplications which result in conjoined twins are not well documented in buffaloes (Singh *et al.,* 2010), etiological factors are unclear (Leipold *et al*., 1972), diagnosis after the onset of calving process is often difficult and delivery is usually undertaken by fetotomy (Shyam *et al*., 2011 and Patel *et al*., 2016) or by cesarean section (Simon *et al*., 2009 and Singh *et al*., 2022). The present case reports the successful per-vaginal delivery of conjoined twins by episiotomy in a buffalo.

A pluriparous full-term pregnant buffalo in its third parity was presented with a history of unproductive straining for the last 12 hours and ruptured water bag with no visible fetal parts at the vulva. Attempt to deliver the fetus were made by a local paravet but was futile. Vulval lips were edematous and improperly relaxed at the time of presentation (Fig.1). All vital parameters were within the normal physiological range. The perineum was washed and detailed obstetrical examination revealed that the fetus was in anterior longitudinal presentation with the head, neck, and forelimbs extended into the birth canal. The absence of suckling, palpebral, and pedal reflexes indicated that the fetus was dead. The fetal head and forelimbs were secured

[1]Assistant Professor, Corresponding author Email id: radhikanaidu8121@gmail.com
[2]Assistant Professor
[3]Professor and Head

by cotton snares. Repulsion of the fetus with deeper exploration revealed the presence of another fetal head and additional forelimbs. Further, the uterus was infused with sodium salt of carboxy methyl cellulose (CMC) solution (2%) and a deeper examination was performed to diagnose conjoined twins.

The conjoined twins were smaller than normal size and traction failed to deliver them as the posterior vaginal and vulval passages were insufficient. Hence, it was decided to perform episiotomy instead of opting for cesarean section.

Epidural anesthesia was performed with 2% lignocaine hydrochloride (5 ml) at the sacrococcygeal space. The incision site of the vulva was infiltrated with 2% lignocaine and an incision (approx.4 cm) was made at the junction of the mucosa and skin at the upper third of the vulvar labium in the shape of a minor arc in a dorsolateral direction (Noakes *et al*., 2018) (Fig. 2). This created space in the vaginal cavity, eye hooks were applied on the inner medial canthus of the other head of the other fetus, and the birth canal was thoroughly lubricated with 4 liters of warm 2% sodium CMC solution. Manual traction was applied simultaneously on the cotton snares applied to the forelimbs and the eye hooks secured the heads of both the fetuses, which aided in the per-vaginal delivery of conjoined monster. Subsequently, the vaginal mucosa and perineal muscles were sutured in a simple continuous suture pattern with absorbable catgut No. 3 (Fig. 3) and the skin was sutured with non-absorbable nylon in cross mattress pattern. The fetal membranes were expelled normally after delivery. Post-operative treatment was followed for 5 days with parenteral Inj. Ceftriaxone plus Tazobactum (3375 mg IM), Inj. Meloxicam (0.5 mg/kg IM), Inj.Chlorpheniramine maleate (10 ml IM) and Inj. Tribivit (10 ml IM) and topical application of Oint. Povidone Iodine. Sutures were removed 14 days after the surgery and the animal had exhibited an uneventful recovery.

These conjoined twins have symmetrical component parts categorized as Diplopagus monsters/Siamese twins, each conjoined twin had a separate head, pair of fore and hind limbs (Dibrachius and Dipus), and both attached at the sternal region termed as Thoracopagus/ Sternopagus/ Ziphopagus (Fig. 4) (Roberts, 1971). The present case could be a non-inherited teratogenic defect of development since there was no history of monsters being born in the previous two calvings (Shukla *et al*., 2011; Ravikumar *et al*., 2012). The present findings corroborated with the observations of Simon *et al.* (2009) and Singh *et al.* (2021) who stated that conjoined twin monsters were always genetically identical and shared the same sex, as observed in the present case where both the fetuses were female. In practice, monsters were delivered by various approaches based on the severity of the malformation of the fetus. However, dystocia due to conjoined twins in a buffalo was delivered per-vaginally by manual traction (Ravikumar *et al.,* 2012 and Singh *et al.,* 2021) or fetotomy (Shyam *et al*., 2011; Patel *et al.,* 2016) or cesarean operation (Simon *et al*., 2009; Singh *et al.*, 2022). But in the present case, the episiotomy technique was adopted to

Fig 1.Edematous and Narrow vulva region

Fig 2. Episiotomy procedure

Fig 3. Application of sutures at vulva region

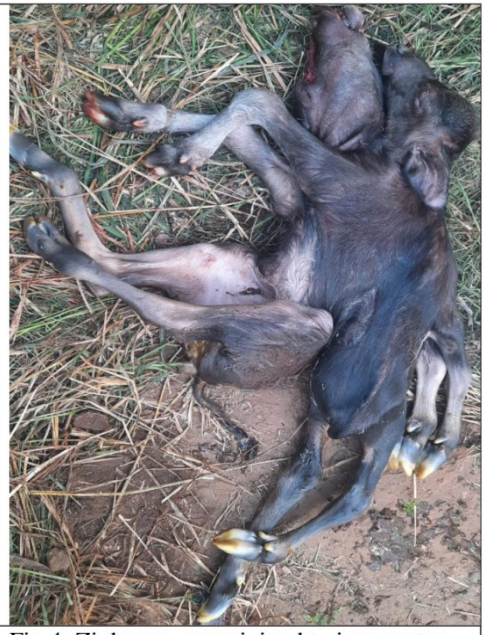

Fig 4. Ziphopagus conjoined twin monster

deliver the twin monster as they were smaller than usual size and presence of a narrow vulval opening. Finally, It is concluded from the present case that episiotomy is the best suitable technique to deliver the monsters if the cause of dystocia is narrow vulval opening with fully dilated cervix.

REFERENCES

Leipold, H.E., Dannis, S.M. and Huston, K. (1972). Embryonic duplication in cattle. *Cornell Veterinarian,* **62**: 572-80.

Noakes, D. E., Parkinson, T. J. and England, G. C. (2018). Fetal dystocia in livestock: Delivery per vaginum In: *Arthur's Veterinary Reproduction and Obstetrics-E-Book*, 10th Edn. Elsevier Health Sciences. pp. 273.

Noden, D. M. and Lahunta, A. D. (1984). The Embryology of domestic animals-developmental mechanisms and malformations, 1st Edn. Williams and Wikins, Baltimore, London.

Patel, A., Saxena, A., Yadav, S.S., Yadav, D., Agrawal, J.K. and Kumar, A. (2016). Extraction of dicephalus – dithoraco – disternopagus – tetrabrachiustetrapus - dicaudatus monster in buffalo-fetotomy: A case report. *Buffalo Bulletin*, **35**(4): 513-516.

Ravikumar, K., Krishnakumar, K., Napolean, R.E. and Chandrahasan, C. (2012). Per-vaginal delivery of a Dicephalus Dicaudatus Xiphophagus monster. *Indian Journal of Animal Reproduction,* **33**(2)**:** 96-97.

Roberts, S.J. (1971). Gestation period-Embryology, fetal membranes and placenta- Teratology In: *Veterinary Obstetrics and Genital Diseases (Theriogenology),* 2nd Edn. C.B.S. Publisher and Distributors, Delhi. pp 70-73.

Selvaraju, H., Kathiresen, D. and Veerapadian, C. (2002). Dystocia due to conjoined twin monster in a buffalo- A case report. *Indian Veterinary Journal*, **79**: 721-722.

Shukla, S. P., Mudasir, Q. and Nema, S. P. (2011). Dystocia due to a conjoined twin monster foetus in a female buffalo. *Buffalo Bulletin*, **30**(1): 12-13.

Shyam, S., Sandeep, K., Gyan, S., Ravi, D. and Pandey, A. K. (2011). Delivery of a dicephalus-thoraco-sternopagus tetrabrachius dicaudatus monster in buffalo. *Indian Journal of Animal Reproduction*, **32**(1)**:** 70-71.

Simon, M. S., William, B. J. and Kannan, T. A. (2009). A rare case of conjoined twin monster (ischiopagus) in a she buffalo. *Indian Journal of Animal Reproduction*, **30**(1): 90-91.

Singh A.K., Brar P.S., Panday A.K., Prabhakar S. and Gandotra V. K. (2010). Dystocia due to conjoined Siamese twin monster in a buffalo: A case report. *Indian Journal of Animal Reproduction,* **31**(1)**:** 85-86.

Singh, B., Singh, K. and Kumar, R. (2021). Dystocia due to conjoined twin monster in a non descript buffalo. *Buffalo Bulletin,* **40**(4): 661-663.

Singh, G., Dutt, R., Kumar, A. and Venkateshappa, A. (2022). Dystocia due to Dicephalic dipus dibrachius monster in a Murrah buffalo. *Buffalo Bulletin*, **41**(3): 417-421.