

Per-Vaginal Delivery of Dicephalic Perosomus Elumbis Monster by Partial Fetotomy in a Cow

Sandeep Panihar, Anand Kumar Pandey, Pradeep*, Gyan Singh, Rakesh Kumar, Garbhit

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Dystocia, a challenging condition in obstetrics, can arise from various causes, including fetal monsters with structural abnormalities. Congenital fetal monstrosities are not uncommon clinical findings in dairy cattle where multiple anatomical defects could be found in the fetal monsters. Although, the exact etiologies for these conditions are not known but their clinical presentation sometimes causes life threatening condition to the dam along with the loss of calf crop. The most common group of monsters is conjoined twins which arise from incomplete division from fertilized ovum. Dicephalic is described as an abnormality of incomplete separation of heads resulting from twinning in animals. Perosomus elumbis is a rarely occurring congenital condition characterized with partial or complete agenesis of lumbar, sacral and coccygeal vertebrae and ankylosis of hind limbs (Son, 2008). The conspicuous feature for the obstetrician is the rigidity of the posterior limbs (Arthur *et al.*, 2001). Double headed calf represent a case of absolute fetal oversize with subsequent provoke of dystocia in animals. The present report represents the successful per-vaginal delivery of dicephalic perosomus elumbis monster by partial fetotomy in a cow.

CASE HISTORY AND OBSERVATIONS

A full-term pregnant cow in 3rd parity was presented to Veterinary Clinical Complex of LUVAS, Hisar (Haryana, India), with the history of prolonged straining during labour, with no successful delivery of the fetus through the birth canal. Local veterinarian was called for help but failed to deliver the calf. Previous calving of the animal was reported to be normal. The animal was dull, depressed, exhausted, and partially anorectic. The general clinical examination of the animal revealed temperature 101°F with normal pinkish mucus membranes and normal vital parameters. Vaginal examination revealed a fully dilated cervix, and both forelimbs presented in the dry birth canal along with a laterally deviated head. After proper lubrication, further exploration through per vagina revealed another head that was attached at the level of the neck of the first fetus. On the basis of clinical examination, the dystocia was presumptive diagnosed due to a dicephalic fetal monster. Therefore,

Department of Veterinary Gynaecology and Obstetrics, Lala Lajpat Rai University of Veterinary and Animal Sciences, Hisar-125004, Haryana, India

Corresponding Author: Dr. Pradeep, Department of Veterinary Gynaecology and Obstetrics, Lala Lajpat Rai University of Veterinary and Animal Sciences, Hisar-125004, Haryana, India. e-mail: pradeep30121996@gmail.com

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fetotomy was opted as obstetrical operation of choice to deliver the fetus per vaginam.

TREATMENT AND DISCUSSION

Before the start of fetotomy procedure, the animal was administered with DNS (4 liter; I/V), Flunixin meglumine (15 mL; I/M), Dexamethasone (10 mL; I/M) and epidural anesthesia was given with 2 % lignocaine hydrochloride (5 mL). Half threaded Thygeson's fetotome with one end of wire saw from head of fetotome was passed around the one head which was near to the pelvis, behind the atlanto-occipital joint, and then this end of wire was passed through the fetotome for complete threading. The head of the fetotome was placed behind the posterior border of mandible and head was amputated from the neck and extracted. Then mutation was carried out to correct the head deviation and the fetus was delivered by forced extraction on both the forelimbs (Fig. 1).

The dicephalic monster fetus exhibited the partial lack of development of the spinal cord and vertebrae caudal to the thoracic area and squeezed perineal region along with ankylosis of the hind limbs (Fig. 2). The placental membranes were also removed after delivery of the fetal monster. Post-operatively the cow was treated with antibiotic, analgesic, B-complex vitamins and fluids for seven days. The animal had an uneventful recovery.



Fig. 1: Dicephalic fetus after fetotomy

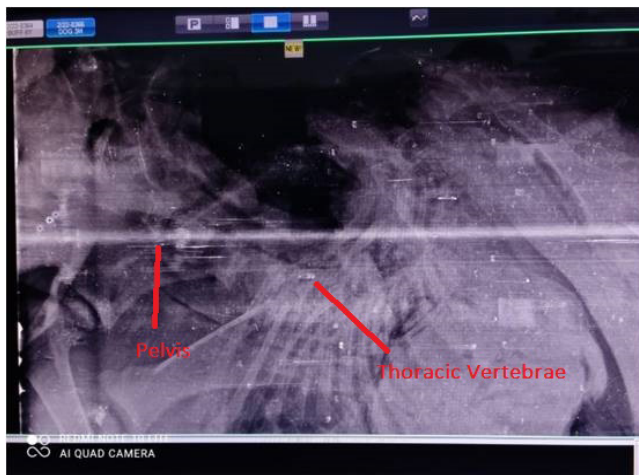


Fig. 2: X-ray showing incomplete vertebral development caudal to thoracic area

The common cause of dystocia in cattle and buffalo include fetal monstrosities and malformation of fetuses (Shukla *et al.*, 2007). The incidence of fetal monstrosities as a cause of fetal dystocia has been reported to be 16% (Sharma *et al.*, 1992a). Usually, the dystocia due to perosomus elumbis occurs at the posterior region where posterior limbs ankylosis usually develops (Jana and Jana, 2010), which is however contrary to the present report as there was cranial duplication including the double head resulting in dystocia at anterior part. In most of the cases Cesarean is the final choice of the clinicians for the correction of such type conditions (Testoni *et al.*, 2005). Vaginal delivery of a fetus with multiple congenital

deformities can only be relieved through the fetotomy procedure (Ghuman *et al.*, 2016). So in present case, fetotomy was opted for management of fetal monstrosities as there was adequate space for fetotomy procedures. Fetotomy prevent the dam from Cesarean section as well as there will be greater chances of survivability of dam (Sharma *et al.*, 1992a; 1992b). Similar to this case, Gulia *et al.* (2021) reported successful per-vaginal delivery of Janiceps perosomus elumbis foetus in a cow.

This clinical case report puts on record a successful per-vaginal delivery of a *Perosomus elumbis* monster with concurrent occurrence of cranial duplication (*i.e.* the double head) in a cow by using fetotomy.

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