

Case Study

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Dystocia Due to Dicephalus Monster in a Cross Bred Jersey Cow and its Surgical Intervention: A Case Study

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ABSTRACT

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The present case reports a rare case of dystocia in a Cross bred Jersey cow due to double-headed foetus (dicephalic monster). The cattle was relieved by performing emergency caesarean section (left para-median laparohysterotomy). Based on the appearance, the retrieved calf was confirmed as dicephalus foetal monster. With good post operative care and management, the animal recovered uneventfully.

Introduction

Congenital defects are structural or functional abnormalities and can affect on an isolated portion of a body system, entire system or parts of several systems and may cause obstetrical problems (Srivastava *et al.*, 2008). Dicephalus is described as an abnormality of incomplete separation of heads in the cephalic region resulting from twinning in animals. Basically, abnormal duplication of the germinal area in the foetus usually gives rise to congenital fetal abnormalities with partial duplication of body structures. This duplication of the cranial portion of the foetus is more common than that of the caudal

portion and might occur during the primitive streak elongation or regression (Robert, 2004 and Monfared *et al.*, 2013). Dicephalus in bovine often leads to dystocia and caesarian section is the most common sequelae (Sharma, 2006). A case of dicephalus foetal monster in Dirang district of Arunachal Pradesh, India and its retrieval by caesarean operation is being reported in the present study.

Case history and observations

A case was attended at a private diary farm at Khaso village of Dirang circle, West Kameng district of Arunachal Pradesh. According to

the owner, the cow was about four and half years old and was in her third parity (Fig 1). It had a history of straining for the last 18-20 hours and was unable to deliver the foetus. The case was handled unsuccessfully by paravet staffs. On clinical examination it was found that the cow was recumbent with elevated pulse (84/min) and respiration (42/min). Severe tympani along with foeted vulvar discharges (Fig 2) were also observed during the examination. The water bag was ruptured and one of the foetal forelimb was noticeable outside the vulva (Fig 3). Obstetrical examination revealed presence of abnormal foetus with two palpable heads in the anterior longitudinal presentation. The foetus was dead as there was no suckling reflex. On further examination, the head was found to be abnormal with two oral cavities and one of its head impacted the vaginal canal. Forced extraction following mutation was attempted but did not succeed.

Results and Discussion

Considering the severity of the case the caesarean section was performed as per routine surgical method (para-median laparohystrectomy) to deliver the foetus. In the present case the two separate heads were fused at the caudal part of the cervical vertebrae region. This dicephalus monster consisted of four eyes (tetraopthalmus), two pairs of nostrils and two mouths, each with a tongue and two spines. Both the heads and the necks were nearly of same sizes leading to double thorax, single abdomen, two forelimb, two hind limbs and one tail (Fig 4). On the basis of gross examination, the foetus was classified as dicephalus monster (Fig 5). External genitalia indicated the sex of the dicephalic monster foetus as female. Since the cow had already delivered two normal calves in the last two parity, the condition appeared to be non hereditary origin (Chauhan *et al.*, 2012).

Fig.1



Fig.2



Fig.3



Fig.4



Fig.5



All conjoined twins are monozygotic in origin and represent incomplete division of one embryo into two components, usually at some time during the primitive streak stage. It is also possible to have duplication of one part of the future axial (and adjacent) structures. These usually arise during the primitive streak elongation or regression. So, it is important to know various types of monsters in animals, which usually cause dystocia and cannot be removed easily and demand caesarean section in most of the time (Monfared *et al.*, 2013). Dystocia due to dicephalus monster in a crossbred cow are very exceptional and was also reported by Nakhashi *et al.*, (2006) and Salami *et al.*, (2011).

The post operative care was initiated by administering systemic antibiotics (Binocin® @ 10 mg/ kg bw IV) for 7 days, Furea bolus @ 4 bolus daily 3 days, NSAID (Meloxicam @ 0.5 mg/ kg bw IV), ecobolics (epidosin @ 10 ml IM), Ringer's Lactate @ 5000 ml I.V and multivitamins (ConcipleX @ 10 ml IV). The sutures were removed after 14 days. Similar kind of treatment was also reported by Shukla *et al.*, 2011, Salami *et al.*, 2011 and (Kuldeep *et al.*, 2018). Obligation of proper surgical intervention and maintenance of adequate postoperative measures rewarded with uneventful revival of the cow.

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