SURGICAL MANAGEMENT OF DYSTOCIA DUE TO DICEPHALUS INIODYMUS MONSTER CALF IN A GRADED MURRAH BUFFALO

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ABSTRACT

A full term pluriparous graded Murrah buffalo was presented with history of dystocia due to a double-headed calf that struck in the pelvic inlet. A dead iniodymus monster male calf was retrieved by left para median laparohysterotomy. The calf was having two complete heads conjoint at the level of 3rd cervical vertebra and mandibular angles. With good post operative care and management, the buffalo recovered well.

Keywords: *Bubalus bubalis*, buffalo, Dicephalus iniodymus monster calf, graded Murrah buffalo, caesarean, monozygotic twins

INTRODUCTION

Dystocia is the condition in which the first or second stage of parturition is prolonged, making the delivery difficult or impossible and obviously need an external aid in resolving the condition (Roberts, 2002). In buffaloes, cases of dystocia were less frequent compared to cattle and foetal abnormalities were the major causes of dystocia (Purohit and Mehta, 2006). The incidence of foetal dystocia in buffaloes was 7.9% (Phogat *et al*., 1992) and as high as 12.8% (Singla and Sharma, 1992). Dicephalus calf has two heads that are identical in structure. These are monozygotic twins arising from single ovum (Roberts, 2002). Rarely they were delivered normally (Alkhazraji and Naif, 2015) or required decapitation (Rajesh and Prasad, 2014) but often-necessitate surgical intervention (Singh *et al*., 2011) due to their large size disproportionate to maternal pelvis. In the present paper, we report a case of surgical management of dystocia due to dicephalous monster calf in a graded Murrah buffalo.

CASE HISTORY AND CLINICAL OBSERVATION

A full term graded Murrah buffalo in its 3rd parity was presented to the Department of Surgery and Radiology with inability to deliver a calf even after passing 10 h of first stage of labour. It was diagnosed as dystocia due to double-headed calf and futile attempts were made by local Veterinarian to retrieve the calf.

On presentation, the buffalo was dull and mildly dehydrated, but with good uterine contractions. Per vaginal examination revealed a dead conjoint headed calf struck tightly in the

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pelvic inlet. The calf was in anterior longitudinal presentation, dorso-sacral position and both the fore limbs were flexed in. As it was already delayed, an emergency caesarean operation was executed.

TREATMENT AND DISCUSSION

The animal was rehydrated with 3 litres 5% DNS and administered 10 ml Dexamethasone I/V. It was secured in right lateral recumbency and left paramedian site was prepared asceptically. Sedation and local analgesia were achieved by 0.01 mg/kg BW Xylazine hydrochloride and 2% lignocaine hydrochloride respectively. With a 15 cm linear incision on skin and external and internal sheets of rectus abdominis, the uterus was exposed and incised and retrieved a male dead double-headed calf. Uterus was irrigated thoroughly with normal saline, 6 Furazolidone and metronidazole boli were inserted and closed with chromic catgut no. 2 in double inversion manner. After replacing uterus, surrounding area was irrigated again with normal saline and metronidazole liquid was poured inside abdominal cavity. External and internal sheets of rectus abdominis were sutured with chromic catgut no. 2 in interlocking pattern. Cutaneous incision was closed with black braided silk no. 2 in horizontal mattress pattern and applied tincture benzoin seal secured with retention sutures. Post operatively, 3 litres Ringers lactate, inj. Ceftriaxone + tazobactum 3.375 g, inj. ketoprofen15 ml I/V, inj. chlorphaneramine maleate 15 ml, 15 ml B-complex I/M were administered. The same treatment was continued for the next 5 days along with daily dressing. The animal was recovered uneventfully and skin sutures were removed on 12th post operative day.

The retrieved calf has two completely formed identical heads with four ears, four eyes, and two mouths but the body was single with single tail, two fore and two hind limbs. Though the skeletal attachment of both heads was at the level of 3rd cervical vertebra, the angles of both mandibles on medial side were found fused, but the cutaneous attachment was complete at the base of pinnae of medial ears (Figure 1).

Embryonic duplications are malformation due to abnormal duplication of the germinal area giving rise to foetuses whose body structures are partially duplicated and of these, cases of cranial duplication are more common (Roberts, 2002). Genetic and environmental factors also might have predisposed to the present condition as indicated by Purohit *et al*. (2012). As per Camon *et al*. (1992), the present monster may be categorised as iniodymus (two complete and separate skulls with fusion at occipital level). Gross appearance of calf and its appendages were similar to the findings of Fisher *et al*. (1986), Kantharaj *et al*. (2013) and Kumar *et al*. (2014). Rajesh and Prasad (2014) reported congenital defects like cleft palate in one of the heads of the monster, and scoliosis (Ate *et al*., 2011) in a cow calf. We had to opt for caesarean as followed by Singh *et al*. (2011) as it was impossible for normal delivery as the foetus was struck in birth canal, lead to dystocia during parturition.

Figure 1. Photograph showing dicephalus iniodymus buffalo calf. Note attached pinnae of medial ears at the base and two fully developed identical heads.

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