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MANAGEMENT OF DYSTOCIA DUE TO DICEPHALUS FOETUS MONSTER IN BUFFALO (*Bubalus bubalis*)

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ABSTRACT

This case report documents a rare occurrence of fetus with double head in a buffalo and its management through C section.

Keywords: *Bubalus bubalis*, buffaloes, C section, dystocia, dicephalus fetus, Murrah buffalo, posterior presentation

INTRODUCTION

It is not uncommon for farm animals to have congenital defects at birth, thus breeding programmes aim to produce healthy animals with good morphology and high production. In livestock production, the occurrence of congenital malformations, particularly when brought on by parental gene variants, slows down genetic advancement, results in financial loss for breeders when animals die, or impairs the reproductive and productive capacity of the animals, such as milk production (Gholap *et al*., 2014). Dystocia may result from congenital foetal abnormalities; however, these are uncommon and only infrequently recorded in veterinary practice (Singh *et al*., 2020). The majority of cases have multifactorial aetiology, including genetics and environment (drugs, poisonings, viruses, plants, mineral salts, and vitamin (A, D, and E) deficiency). These factors lead to improper separation of primitive streak after day 13 of fertilisation (El Sheikh *et al*., 2010). High economic costs are incurred by congenital defects, which can lead to foetal dystocia, which can result in the foetus's death and put the dam at risk. It is more usual for the cranial than the caudal portions of the embryo to be duplicated (Robert, 2004). Dicephalus is a congenital condition in which newborns are born with two heads. A foetotomy or caesarean section is typically performed to address double head foetuses because they are typically large and induce dystocia (Long, 2009). These kinds of congenital malformations are extremely rare and have been documented in goats (Mukaratirwa and Sayi, 2006), sheep (Monfared *et al*., 2013), cattle (Salami *et al*., 2011), and buffalo (Shukla *et al*., 2011; Singh *et al*., 2022; Ramteke, *et al*., 2023). Every case study pertaining to the management of a dicephalic foetus involves a caesarean section. In this instance, foetotomy was used to treat the buffalo's dystocia caused by the dicephalic foetus.

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CASE HISTORY AND OBSERVATION

A buffalo in first party with dystocia at full term of gestation was referred at Veterinary Clinical Complex, College of Veterinary Science and Animal Husbandry, Acharya Narendra Deva University of Agriculture and Technology, Ayodhya. The history states that the animal was writhing and the water bags had burst 10 h prior, but the attempts to administer the water proved ineffective. The owner of the animal said that a clinical checkup conducted in the field revealed the presence of a monster foetus. Two limbs were in the delivery canal, and the cervix was fully open, according to the vaginal examination. Further investigation suggested that the foetus was a monster with two heads. An emergency caesarean surgery was performed to resolve the case.

TREATMENT

The animal was prepared for surgery with appropriate restarining in right lateral recumbency. A caesarean section was carried out utilizing the paramedian technique and local infiltration anaesthesia (2% lidocaine hydrochloride, 90 ml) (Roberts, 2004). Following delivery, it was discovered that the monstrous foetus had two heads, two forelimbs, and two hind limbs fused together from ischium (Figure 1).

Figure 1. Dicephalic buffalo foetus.

DISCUSSION

The incidence and type of congenital defect cases that are submitted to veterinary faculties differ greatly, as many of the cases are not taken into records (Mee, 2013). Furthermore, Albarella *et al*. (2017) reported the death of a dicephalic derodymus buffalo calf following a dystocia calving; the calf was characterized by total duplication of cranial components *viz*. two muzzles, four eyes, and four ears. Moreover, reports of head duplication with distinct features have been made (Sharma *et al*., 2010; Kumar *et al*., 2014; Mehmood *et al*., 2014). The cause of dicephalus monsters may be genetic environmental pollution (Megahed, 2015), or a combination of the two (Singh, 1988). Reproductive failure has been linked, in general, to exposure to a variety of environmental pollutants (air, water, and food) (Megahed, 2017). From an economic perspective, both the community and the individual should take preventative measures. Before pregnancy is detected, exposure to possible environmental pollutants must be reduced in order to prevent congenital abnormalities in animals. Conjoined sternopagus twin monsters in Mehsani buffalo (Bhoi, 2009) and dicephalus sternopagus tetrabrachius tetrapus dicaudatus monsters in Murrah buffalo (Singh *et al*., 2013) are two examples of conjoined twin cases that have been described previously. Additionally, a Murrah buffalo was found to have a case of dicephalus sternopagus tetrabrachius tetrapus dicaudatus monster (Singh *et al*., 2013; Kumar *et al*., 2023).

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