

DELIVERY OF A DICEPHALUS STERNOPAGUS TETRABRACHIUS TETRAPUS DICAUDATUS MONSTER IN A MURRAH BUFFALO BY CAESAREAN SECTION

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ABSTRACT

Congenital bovine fetal anomalies can be divided into heritable, toxic, nutritional, and infectious categories. Although uncommon in most herds, inherited congenital anomalies are probably present in all breeds of cattle, and but reports in buffaloes are meager. In some herds, the occurrence of inherited anomalies has become frequent and economically important. A rare case of dystocia due to a dicephalic sternopagus tetrabrachius tetrapus dicaudatus monster was relieved by caesarean section.

Keywords: buffalo, caesarean, dicephalus, monster, conjoined, *Bubalus bubalis*

INTRODUCTION

A monster is an individual having multiple anomalies involving many organs and systems of the body. Fetal anomalies and monstrosities are the most common cause of dystocia in bovines. Conjoined twins arise from a single ovum and are monozygotic. Monsters are mostly encountered in cattle with an overall incidence of one in 100,000 bovine births (Roberts, 1971). Conjoined twins develop after the development of embryonic plate (Whitlock *et al.*, 2008). Depending upon the site of

fusion or non-separation, the types of the twin may differ viz. thoracopagus (40%), omphalopagus (33%), pyopagus (18%), cephalopagus (2%) and ischiopagus (2%; Fernando, 1993). These might arise due to genetic and environmental factors. They are rare in other species, and reports in buffaloes are meager.

CASE HISTORY AND OBSERVATIONS

A full-term Murrah buffalo about six and half years old in her second parity with dystocia was brought to the Teaching Veterinary Clinical Complex. It had a history of straining for the previous 8 - 10 h but had been unable to delivered the fetus. The gestation period was over and water bags had ruptured. Both hind limbs along with one pelvis were hanging outside through vulva. Per vaginal examination with proper lubrication after epidural analgesia revealed two tails in the birth canal and fetuses that were joined at the sternal region. The hind limbs of the other fetus present in flexed position breech presentation (i.e. a dicephalic-sternopagus tetrabrachius tetrapus dicaudatus monster).

Forced extraction was attempted by a local veterinarian but did not succeed. The animal was recumbent with severe tympany. The owner was advised for caesarean section. The caesarean



Figure 1. The dicephalussternopagus tetrabrachius tetrapus dicaudatus monster.

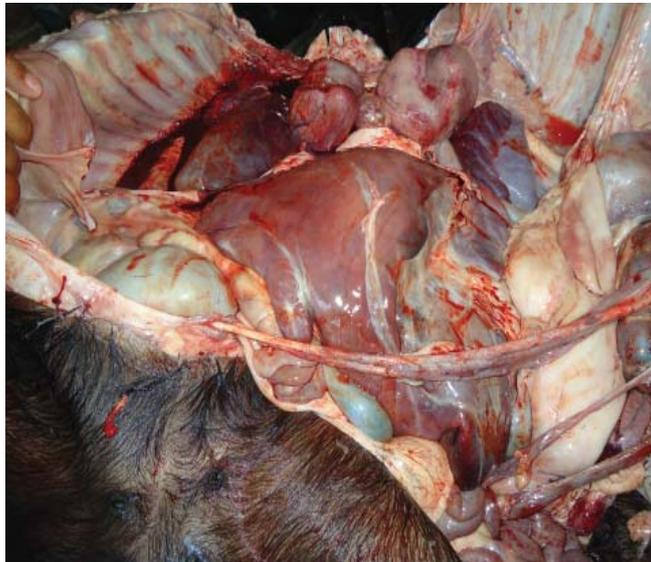


Figure 2. Photograph showing a pair of hearts.

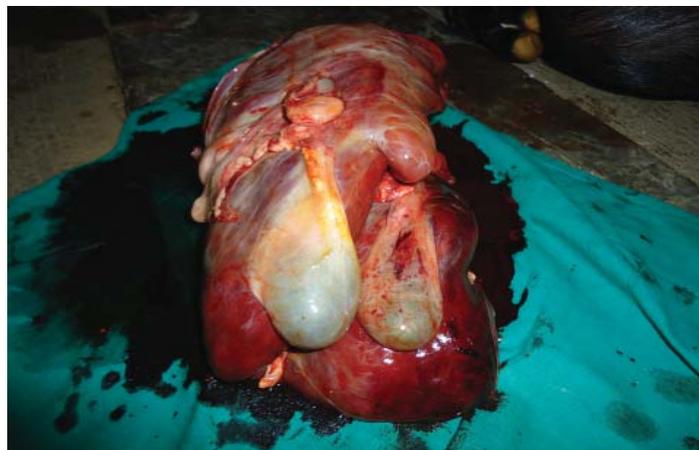


Figure 3. Photograph showing two livers and gall bladders.

section was performed as per routine surgical method (paramedian, lateral to milk vein) and a dicephalic-sternopagus tetrabrachius tetrapus dicaudatus monster was delivered. External genitalia indicated the sex of both fetuses as female. The dam was administered systemic antibiotics, anti-inflammatories, ecbolics, calcium boro-gluconate and multivitamins. The monster was presented for post mortem examination.

DESCRIPTION OF MONSTER

Each conjoined fetus had a separate abdominal cavity; pair of fore and hind limbs, ovaries, kidneys, one each of head, vertebral column, tail, complete gastrointestinal tract, and spleen. But both the livers were joined with each other. The right gall bladder was three times larger in size than left. The genital organs (oviducts, uterus, cervix and vagina) ill developed with external genitalia. The anal opening in each of the conjoined fetus was patent. Thoracic cavities having a heart and lungs were separate, externally conjoined at the sternum. A similar type of monster was reported by Kumar *et al.* (1999) having duplication of all body parts except heart and lungs. Dystocia due to a dicephalus thoraco-sternopagus Siamese monster (Sahu and Pandit, 1999) and a conjoined twin monster (Selvaraju *et al.*, 2002) have been reported as rare cases in buffaloes. A thoraco-sternopagus twin arises due to embryonic duplication of a germinal area whose body structure are partially but not completely duplicated (Robert, 1971). Normal per-vaginal delivery of such types of conjoint twins is difficult due to their enlarged and abnormal size resulting in dystocia. The present case study suggested that caesarean section may be the treatment of choice in fetal monstrosities.

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