AN UNUSUAL CASE OF DYSTOCIA DUE TO ANOPHTHALMIC- ARRHINENCEPHALIC-ANURIC-SIRENOMELUS MONSTER IN MURRAH BUFFALO

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ABSTRACT

This study showed a case of multiple congenital malformations in a Murrah buffalo calf leading to dystocia. There was not only multiple craniofacial abnormalities along with deformities in limbs but also visceral organs were abnormal in shape, size and their positions. Such type of monstrosities is rarest of rare and hence recorded.

Keywords: *Bubalus bubalis*, buffaloes, dystocia, monster, Murrah buffalo, cesarean section

INTRODUCTION

Congenital defects are abnormalities of structure or function present at birth and arise as a result of defective genetics that is associated with fetal environment (Leipold, *et al*., 1983). Monstrosities are more common in buffalo (7.9 to 12.8%) (Singla and Sharma, 1992) and are common cause of dystocia in bovines (Shukla *et al*., 2007). Incidences of fetal monstrosities due to congenital defects are uncommon and their reports are a few in buffalo. This case reports is about a rare type of monstrosity in Murrah buffalo calf having various faciocranial abnormalities and skeletal malformation along with abnormal abdominal and thoracic viscera. It is bizarre which may need to be assigned a different nomenclature.

CASE HISTORY AND CLINICAL EXAMINATION

A pluriparus Murrah buffalo at full term was presented in recumbent condition. There was severe straining since last 12 h without any further progression in delivery after rupturing of water bag. Gynaeco-clinical examination revealed fully dilated birth canal with intact bony fetal mass inside the uterus. Further exploration revealed no proper contour of fetal body because of which disposition was not confirm. The fetus was diagnosed to be a monster. As there was no proper point for obstetrical maneuver or forced traction, it was decided to go for cesarean section.

TREATMENTS AND DISCUSSION

Cesarean section was performed under local anesthesia adapting standard procedure

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to relieve the fetal monster out. The anatomical consideration showed a case of multiple congenital malformation in which whole body gave an appearance of a turtle (Figure 1) i.e. only head region was recognizable. The bones of skull were significantly large especially frontal bone. There was abnormally small mouth (microstomia) having no jaw bones along with absence of nose (Arrhinencephaly) and eyes (anophthalmia) while only one thick muscular ear pinna was present (Anotia) (Roberts, 1971). Oral cavity was abnormal having no tongue (Aglossia congenita) along with large muscular lower lip with everted oral mucosa having large conical horny papillae (Figure 2). Postmortem examination manifest carpal, metacarpal and digits were fused in forelimb (syndactyly) while bones of hind limbs were fused with varying degree with deformed pelvis (sirenomelus) (Roberts, 1971). There was lack of coccygeal vertebrae with deformed sacrum (Anury) (Roberts, 1971). Different abdominal as well as thoracic visceral organs were not in normal shape and size along with altered topographic position. Up to some extent such monstrosity may be classified as anophthalmoacromelic syndrome and Ivemark syndrome (Defects in heart, spleen, lungs and liver etc) in humans (Konstantinidou *et al*., 2008). The animal was treated with fluid therapy, antibiotics, anti-inflammatory, liver tonics and immune booster drugs for next 5 days with daily dressing as post operative care. The animal was discharged with uneventful recovery.

Embryonic and fetal development is the result of a complex series of various events and if properly accomplished, the outcome is a healthy neonate but deviations in the sequential steps of development may be followed by embryonic loss, fetal death, fetal anomalies and Monstrosities. These abnormalities might be caused because of genetic (single gene defect, polygenic abnormality and chromosomal anomalies) or environmental factors (climate, ovulation rate, feto-maternal recognition factor, infectious agents and teratogens) or by interaction of both (Long, 2009). During fetal development chromosomal abnormalities are present in intergenerational and intragenerational patterns of inheritance such as the common simple autosomal recessive, e.g. syndactyly in cattle (Batra *et al*., 2015) which may cause varying degree of structural abnormalities leading to dystocia, still birth or abortion. Teratological development of the ovum, embryo or fetus may result in death or malformation of the antenatal individual (Roberts, 1971). Viruses (Blue tongue virus, Bovine viral diorrhoea virus and Rift valley fever virus etc), iodine deficiency and hyperthermia are some teratogens in ruminants. Teratogenic agents may not kill the developing conceptus but many of the abnormalities they induce are incompatible with life (Long, 2009). The exact etiology of the most congenital defects is unknown. Dystocia due to monsters is usually relieved by cesarean section since fetotomy is of limited usefulness except in a few monsters (Purohit *et al*., 2012). A number of different congenital anomalies have been reported in cattle (Agerholm *et al*., 2001; Duncan *et al*., 2001) as well as in buffalo as Arthrogryposis (Kumbhar *et al*., 2012), Cyclopic with arhinia (Tarun *et al*., 2012), Campylorrhacchis contorta (Kumar *et al*., 2014) and Perosomus elumbis (Jasmer and Ajeet, 2016) etc. A case of transversal tetra-hemimelia with multiple craniofacial anomalies in a buffalo calf reported by Honparkhe *et al*. (2016) was similar to present case in some aspects but this case is unique in its type and hardly may be reported earlier.

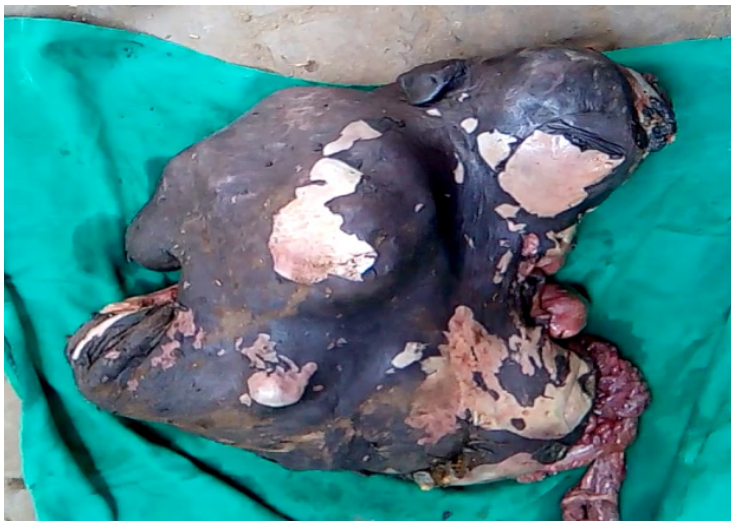

Figure 1. Fetal monster.

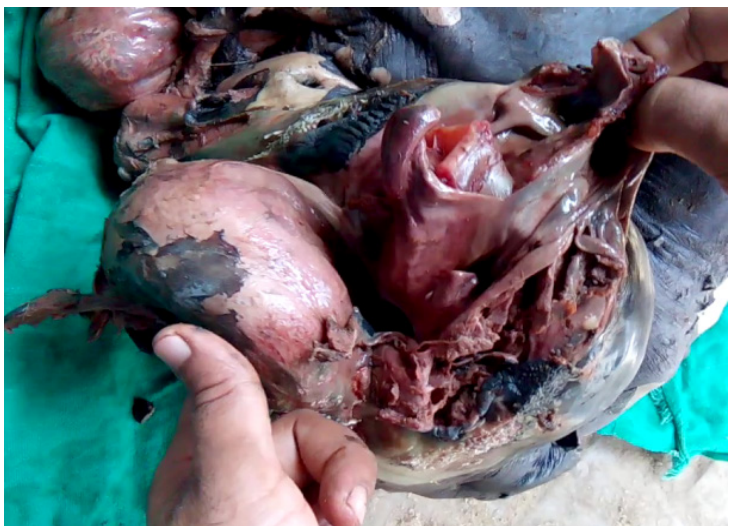

Figure 2. Oral cavity showing everted mucosa with horny papillae and thick lower lip.

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