DICEPHALOUS DIPUS TETRABRACHIUS CALF IN A MURRAH BUFFALO

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ABSTRACT

After caesarean operation of a Murrah buffalo a monster calf was delivered. The calf had two heads (Dicephalous), four fore limbs (Tetrabrachius) and two hind limbs (dipus). The case was diagnosed as Dicephalous dipus tetrabrachius.

Keywords: dicephalous dipus tetra brachius, Murrah buffalo, caesarean operation

INTRODUCTION

Dystocia is common sequelae of fetal monstrosities. Abnormal duplication of the germinal area during embryogenesis of monozygotic fetus will give rise partial duplication of body structures (Sharma *et al*., 2010). Congenital defect present at birth may affect a single structure or function, an entire system, part of several systems or a structure and function (Morrow, 1980). Duplication of cranial part of the fetus is more common than that of the caudal parts (Roberts, 1971) which during the primitive streak elongation or regression (Noden and Lahunta, 1984). Monstrosities are malformed foetuses which are rare in buffaloes (Chauhan and Verma, 1995). Incidence among all calves seems to range from 0.2 to 3.0% with 40 to 50% born dead and only a small fraction of reported defects not being externally visible. The most frequently encountered congenital defect involves the skeletal system (Morrow, 1986). Monstrosities are associated with either congenital defects or infectious disease (Arthur *et al*., 2001) and may or may not interfere with birth. Here is the uncommon case of Dicephalous dipus tetrabrachius calf taken out by caesarean operation put on record.

CASE HISTORY AND OBSERVATIONS

A full term pleuriparous Murrah buffalo was presented to college clinic. The animal had severe straining, restlessness and colic like symtoms for past 12 h. Vaginal examination revealed incomplete dilation of cervix. Physiological parameters like body temperature, pulse and respiratory rate were within physiological limits.

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TREATMENT AND DISCUSSION

Cervical dilatation was unsuccessfully attempted by administering 30 mg of Valethamide bromide injection. This ultimately necessitated caesarean operation. The operation was performed by ventral paramedian approach under xylazine sedation and local analgesia as per Roberts (*loc. cit*.). A dead fetus with two heads (Dicephalous), four eyes (tetra opthalmous) four fore limbs (tetrabrachius) and two hind limbs (dipus) was removed after caesarean operation (Figure 1).

Double or conjoined monsters usually arise from a single ovum and are monozygotic. They are result of incomplete division of a fertilized ovum and show great variation from partial duplication to almost complete separation of two individuals, joined in just a few places. A wide variety of conjoined twins in buffalos was reported by Chauhan and Verma (loc. cit.), Bugalia *et al*., 2001; Kasiraj *et al*., 2001. Jones and Hunt (1983) stated that the causes of many congenital anomalies are essentially unknown; however, the important known causes are prenatal infection with a virus, teratogens ingested by mother, vitamin deficiency (A and folic acid), genetic factors and/ or combination of these factors. The zygote (<14 days) is susceptible to genetic mutations and chromosomal aberrations. During the embryonic period (day 14 to 42 days), the embryo is highly susceptible to teratogens, and the effect decreases gradually as embryo matures to fetus (Morrow, loc. cit). The embryonic disk differentiates on the 13th day. If the split occurs after day 13, then the twins will share body parts in addition to sharing their chorion and amnion (Finberg, 1994) and it is

Figure 1. Photograph showing Dicephalous dipus tetrabrachius calf.

thought that some factors are responsible for the failure of twins to separate after the 13th day after fertilization (Srivastava *et al*., 2008) that result in conjoined twins.

SUMMARY

Present case describes about a monster removed by caesarean section.

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