EXTRACTION OF A DICEPHALIC MONSTER IN BUFFALO - FETOTOMY: A CASE REPORT

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ABSTRACT

A successful delivery of dicephalic monster through fetotomy was recorded.

Keywords: dicephalic monster, buffalo, congenital defect, fetotomy

INTRODUCTION

Monstrosities are malformed fetuses, which are rare in buffaloes (Chauhan and Verma, 1995 and Bugalia et al., 2001). Incidence among all calves seems to range from 0.2 to 3.0 percent with 40 to 50 percent 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. Abnormal duplication of the germinal area during embryogenesis of a monozygotic fetus will give rise to partial duplication of body structures (Sharma et al., 2010). Duplication of the cranial portion of the fetus is more common than the caudal portion (Roberts, 2004). Dystocia is common sequelae of fetal monstrosities. Fetotomy offers a good alternative to the caesarean for relieving a fetal monster causing dystocia (Vermunt, 2009). In the present study, a dicephalic fetal monster was relieved by fetotomy.

CASE HISTORY AND CLINICAL EXAMINATION

A five-and-half-year-old she Murrah buffalo with full term gestation was presented to the Teaching Veterinary Clinical Complex, Mathura University, with a complaint of unsuccessful straining, lasting ten hours. Clinical examination revealed an increase in respiration and pulse rate with normal rectal temperature. Obstetrical examination revealed a dicephalic fetus, in anterior longitudinal presentation, dorso sacral position with bilaterally flexed knee joint.

TREATMENTS AND DISCUSSION

Obstetrical procedure-Percutaneous fetotomy was indicated, as attempts to extract the morbid monster by forced traction would pose great risk to the dam. The animal was restrained in lateral recumbency following low epidural anesthesia with 2% of lignocaine hydrochloride. A fetotome was partially threaded on one side,
and a sand snare introducer was applied at end of the wire. The wire was then carried in the birth canal with loose loops to pass over the deviated head and retrieved from ventral side; the fetotome was then completely threaded outside, and the loop was positioned near the base of the head attachment. A final check was made to ensure the wire rested behind the ears at the base of the attached head. Now, the head of fetotome was carried into the birth canal and positioned at the juncture of the two heads ventrally. Finally, sawing was done, initially with short strokes followed by a continuous full hand strokes till the head was amputated. The amputated head was extracted by applying Krey-Schottler double jointed eye hook. After thorough lubrication of the birth canal, the remaining fetus was extracted by simultaneous three point traction on both extended fore limbs and head with the help of obstetrical chains ensuring minimum damage to the birth canal. Thorough examination of fetus revealed two heads conjoined at the base of the medial ears approximately at 45° (Figure 1) and both heads attached to single neck. One of the heads had better alignment with the vertebra than the other. The neck, thorax, abdomen and limbs were grossly normal. These observations are in consonance with the earlier findings (Sharma et al., 2010 and Fisher et al., 1986).

Dicephalus monsters have been reported in goats (Pandit et al., 1994), buffaloes (Chauhan and Verma, 1995; Raju et al., 2000; Bugalia et al., 2001; Srivastava et al., 2008) and cows (Chandrahasan et al., 2003; Patil et al., 2004; Abraham et al., 2007). 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, 1986). Sharma et al., (2010) stated that monstrosities are malformed monozygotic individuals due to abnormal duplication of the germinal area giving rise to a fetus whose body structures are partially duplicated. 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 thought that these factors are responsible for the failure of twins to separate after the 13th day after fertilization (Srivastava

Figure 1. Dicephalic monster.
et al., 2008). Thus the present report describes relieving dystocia due to dicephalic monsters in buffaloes by fetotomy and its preventive measures. The technique is safer and less time consuming, it can be used successfully as an alternative to the caesarean operation seems expensive to the farmer. Identification of specific cause will aid in ensuring the preventive measures. This can be achieved by genetic analysis of the dam and sire of a defective fetus and discouraging the breeding of positive reactors.

REFERENCES


