DICEPHALUS-MONAUCHENOS-PARAPAGUS MONSTER WITH CLEFT PALATE IN A BUFFALO

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ABSTRACT

Obstetrical management of a rare case of dicephalic conjoined anomaly in a buffalo fetus is reported.

Keywords: *Bubalus bubalis*, buffaloes, dicephalus, fetotomy, parapagus

INTRODUCTION

Congenital anomalies result in high economic losses leading to fetal dystocia, loss of the fetus as well as risk for the dam. The majority of anomalies are due to genetic or environmental etiology like infectious diseases, drugs, poisonings, plants, mineral salts and vitamin deficiency (Whitlock *et al*., 2008). Conjoined twins are a rare disorder affecting 1:200 monozygotic twin pregnancies, 1:900 twin pregnancies and 1:25,000 to 100,000 births (Monfared *et al*., 2013). A rarer form of conjoined twinning is the dicephalicparapagus twins which are fused side-by-side with a shared pelvis (Bondeson, 2001). The present report discusses obstetrical management of dicephalus parapagus conjoined twins in a buffalo.

CASE HISTORY AND OBSERVATIONS

A second parity full term pregnant Murrah buffalo was brought to university veterinary hospital with the history of severe straining for the last 12 h. Water bags had ruptured and hindlimbs were visible at the vulva. Traction on hindlimbs applied by the field veterinarian was not successful for completing the delivery. Vaginal examination revealed a completely dilated cervix and lubricated birth passage. Fetus was in posterior longitudinal presentation and lumbo-sacral position. In the birth passage, fetal pelvis appeared to be enlarged with two tails. No fetal movements or reflex was appreciable.

TREATMENT AND DISCUSSION

Under epidural anesthesia (8 ml, 2% Lignocaine HCl) and using 1% carboxymethyl cellulose sodium gel, unsuccessful attempts were made to deliver the fetus by applying traction on hindlimbs. Therefore, after assessing the lumbar area, calving rope carrier was passed around the lumbar region and fetotomy cut was completed. Subsequently, mild traction was applied on the hindlimbs and fetal hindquarters were delivered

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Figure 1. Dicephalus-monauchenos-parapagus buffalo monster with double anus, double tail, polydactyly and cleft palate.

successfully (Figure 1). Thereafter, unsuccessful attempts were made to bring the fetus in anterior longitudinal presentation.

Therefore, using Kray Schottler hook (sharp), traction was applied on vertebral column. Another malformed limb was also used as traction point and the fetal delivery was completed. Gross examination revealed a combination of multiple anomalies as the fetus was having two heads (dicephalic), one neck (monauchenos), two spines merging at the coccyx and joined at the thorax by sections of ribs, three forelimbs (tribrachius, two normal limbs and one limb with four digits termed as Polydactyly), one broad ribcage, duplication of most of the visceral organs, two separate half-sacrums, which converge distally, one broad pelvis, double anus, two tails and two hind limbs (dipus) and cleft palate (Figure 1). This anomaly of conjoined twins was termed as dicephalicparapagus, as each had a separate head and bodies were joined.

These calves were highly symmetric for conjoined twins, giving the appearance of having just a single body without marked variation from normal proportion. Moreover, several vital organs were doubled up; each twin has a separate heart, stomach and spine. Similar types of case were reported in cattle (Karthik *et al*., 2013). The exact cause for this kind of anomalies still remains a puzzle; they are either inherited or caused by environmental teratogen (Whitlock *et al*., 2008). In summary, the present report illustrates a very rare case of a conjoined twins.

REFERENCES

Bondeson, J. 2001. Dicephalus conjoined twins: A historical review with emphasis on viability. *J. Pediatr. Surg*., **36**: 1435-1444.

Karthik, K., S. Muneeswaran, S. Shinde, M. Kesavan, P. Tamilmahan and M. Prakash. 2013. Diprosopusmonauchenos in a Jersey cross calf. *International Journal of Livestock Research*, **3**(3): 74-76.

Monfared, A., H. Sahar and T. Mohammad. 2013. Case report of a congenital defect (Dicephalus) in a lamb. *Global Veterinaria*, **10**(1): 90-92.

Whitlock, B., L. Kaiser and H. Maxwell. 2008. Heritable bovine fetal abnormalities. *Theriogenology*, **70**: 535-549.