MONOCEPHALIC TETRABRACHIUS TETRAPUS MONSTER IN A MURRAH BUFFALO

J.K. PRASAD[1], G.K. DAS[2], B. KRISHNAPPA[3], BRIJESH KUMAR[4], SNEHAL RAMTEKE[5], H.B. RAKESH[6], M. SINGH[7], G.C. SHARMA[8], AND YOGESH SONI[9]

Division of Animal Reproduction, Indian Veterinary Research Institute, Izatnagar- 243 122 (U.P.) India

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ABSTRACT

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A rare case of monocephalic tetrabrachius tetrapus monster was extracted per-vaginally by detruncating in a Murrah buffalo.

Key words: Monocephalic tetrabrachius tetrapus, Monster, Detruncating, Murrah, Buffalo

INTRODUCTION

Fetal monstrosities are sporadic and their reports in the said species are meagre. Duplication of cranial portion of the fetus is more common than the caudal portion (Roberts, 1971). Dystocia is a common sequel for fetal monstrosities; however fetotomy offers a good and feasible alternative to the caesarean section to relieve dystocia (Vermunt, 2009). In the present case, an abnormal fetus with apparent duplication of hind quarter and parasitic forelimbs (monocephalic tetrabrachius tetrapus) has been successfully relieved per-vaginally by detruncating (Craig, 2000).

CASE HISTORY AND OBSERVATIONS

A six and a half year old, pluriparous Murrah buffalo was referred (case no: 74757) to the Referral Veterinary Polyclinic, VGO, IVRI, Izatnagar with the history of full term gestation and futile handling. Animal had unproductive straining for eighteen hours. Respiration rate and rectal temperature were 21/min and 102.4°F respectively. Clinical examination revealed hanging fetal hind quarter with two more extremities at vulva. Meticulous per-vaginal explorations revealed those extremities were of forelimbs originating abnormally from dorsum of thorax. It was astonishing to palpate the second hind quarter conjoined to the previous. These findings resulted in diagnosing the case as monster. However, fetal head was beyond the approach and it had negative anal reflex.

TREATMENT AND DISCUSSION

Animal was subjected to epidural analgesia with 2% lignocaine hydrochloride. Both hind quarters of monster were detruncated one after the other. Forced traction on exposed vertebrae using krey's tongs was found unsuccessful due to the obstruction of pelvic inlet by a big thoracic lump of monster (Fig-condensed). At this juncture, monster head was palpable. As a last resort, an attempt was made to extract the monster in anterior presentation with extended fore limbs. The condition relieved successfully with three point traction on fore limbs and head (mandible) using snare and long handled hooks to the respective parts. The dam was discharged after 24 hours with routine prescription of antibiotics and supportive therapy. Gross examination revealed a well developed female monocephalic monster with hind quarter duplication- double pelvis, and one pair of parasitic forelimb located abnormally on dorsum directing caudally (Fig). The monster weighed 30.5 kg with heart girth accounting unusually high- 74.6 cm (Normal: 70.2 cm) and this part was responsible for obstruction at pelvic inlet even after detruncating. Gross bifurcation of vertebrae posterior to thorax revealed separate lumbar, sacral and coccygeal vertebrae without skeletal ankylosis. However, thorax, neck and head were shared. The thorax enclosed one enlarged heart, two lungs and an oesophagus with intact diaphragm. In addition the liver, spleen, fore stomach and intestine up to the end of ileum appeared single. But the ileum was

divided to feed two complete sets of large intestine. A similar finding has been reported in thoracosternopagus monsters which shared their vital organ (Prasad *et al.*, 2006). Urinary tract was symmetrically divided with a kidney in each part as found in the earlier report (Antoine *et al.*, 1997). However, urinary bladder and genital tract were unable to trace completely because of irregular detruncating. And it was also interesting to note presence of fully developed external genitalia in each hind quarter.

The present monster appears monozygotic in origin, and is probably due to incomplete embryo division at the stage of primitive streak development. Moreover, condition reveals non-hereditary, as the case had no history of monster birth in the previous calving and was bred regularly by artificial insemination. These types of congenital abnormalities are getting reported time to time in buffaloes. Hence, a systematic study should be made to record present trend of comparative incidence of monstrosities at organized farm and rural buffaloes. Cattle during first trimester of pregnancy seem to be the most susceptible to the various teratogenic effects (Knight and Walter, 2004). Reports on influence of teratogens in buffaloes are minimal. Thus, there is a critical need to evaluate the effect of readily accessible environmental or plant teratogens on embryogenesis. Identification of particular cause makes a window to keep such pregnancy losses minimal.

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FIG. MONOCEPHALIC TETRABRACHIUS TETRAPUS MONSTER IN BUFFALO