

Dystocia due to Monozygotic Twin Monster in Murrah Buffalo

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ABSTRACT

A nine year old full term pregnant fifth parity Murrah buffalo was presented to TVCC with the complication of dystocia due to a conjoined twin monster foetus with dicephalus derodymus Thoracopagus tetrabrachius tetrapus dicaudatus along with scoliosis. It was uncommon case of anterior duplication of foetus in buffalo and its per- vaginal delivery by fetotomy was performed successfully.

Keywords: Congenital defect, Monster, Dystocia, Fetotomy

Congenital malformations (due to genetic causes) represent a hidden danger for animal production; above all when genetic selection is undertaken for production improvements (2). These malformations are responsible for economic losses either because they reduce the productivity of the farm, or because their spread in the population would decrease the total productivity of that species/breed. The occurrence of congenital malformations has caused a slowing of the genetic progress and economic loss for the breeders, due to the death of animals, or damage to their reproductive ability or failing of milk production. Moreover, they cause animal welfare reduction because they can imply foetal dystocia and because the affected animals have a reduced fitness with little chances of survival (8).

Various kinds of foetal anomalies and monstrosities have been recorded in bovines

(14, 18) and occur sporadically (3). Commonly encountered fetal monsters which predisposes to dystocia are hydrocephalic, anasarctic or ascitic foetus, or monsters with marked skeletal defects include schistosomus reflexus, campylorrhachis scoliosa, perosomus elumbis or conjoined twins and achondroplastic foetuses. These anomalies are believed Dystocia is the most common sequel of fetal monstrosities in bovines (19) while conjoined twin monster is uncommon (7, 9). Conjoined twins are mostly monozygotic in origin and may be fused medially at different parts of body and cranial fusion was most common (18). Conjoined twin is resulted from incomplete subdivision of embryonic axis that occurs at a relatively later phase of development (17). Congenital defect present at birth signifies the abnormality of structure or function which may affect a single structure or function, part of system or its structure and function and/or an entire system (15). Dystocia is common

sequelae of fetal monstrosities. Fetotomy offers a good alternative to the caesarean for relieving a fetal monster causing dystocia (22). While the present clinical report recorded correction of dystocia due to dicephalic monster foetus in buffalo by fetotomy

Case History and Observations

A nine year old full term pregnant fifth parity Murrah buffalo was presented to the Teaching Veterinary Clinical Complex (TVCC), College of Veterinary Science & Animal husbandry, NDUAT, Faizabad, UP (India) after full term with the history of straining for the previous 18 hours with unsuccessful attempts to deliver the foetus. The water bags had already ruptured. The cow was handled by paravet for almost 8-12 hours, traction with rope and hook was also applied. Laceration was also present on vulvar lip which was caused during traction. Clinical examination revealed slightly raised temperature (102°F) and pulse (90/min) with pale mucous membranes. Per vaginal examination revealed complete dilation of cervix with foetus in anterior presentation, dorsosacral position with one head and two forelimb in the birth canal. Further complete exploration revealed conjoined twin monster. Since, pervaginal delivery was not possible with forced traction; it was decided to perform fetotomy.

Obstetrical Procedure and Treatment

Attempts to relieve dystocia, by mutation and forced extraction with adequate lubrication of birth canal, were unsuccessful to deliver the foetus. Then fetotomy was performed to resolve the dystocia because of the dead foetus. The fetotome with saw wire was introduced around the one head of the foetus and removed by cutting it and one forelimb was also removed by fetotome. Then three ropes were applied over the forelimbs and a hook inserted in the medial canthus of eye to pull the foetus. Again after complete lubrication of birth canal, the foetus

was removed by force extraction. The animal was clinically treated with inj. Opticef (1 gm i.m.), inj. Melonex 15 ml i.m., Avil 10 ml, i.m., DNS 3 lit and R.L 2 lit.i.v. and the intrauterine therapy with 4 Cleanex bolus. The treatment was continued for three days.



Fig. 1: Per-vaginum delivery of Anterior Duplication monozygotic Twin Monster



Fig. 2: Monster: dicephalus derodymus Thoracopagus tetrabrachius tetrapus dicaudatus



Fig. 3: Monster with two anus and two vaginal openings

The monster calf was diagnosed as “female dicephalous tetrabrachious Thoracopagus, sacropagus tetrapus dicaudatus”. Monstrosities of various types have been recorded in cattle (18) but reports in buffaloes are rare. Conjoined twins arise from a single ovum and are monozygotic. This paper reports a rare case of conjoined twin monster in a she buffalo. Incomplete or complete conjoint twin monster are uncommon but have been reported earlier in cattle (11) and in buffaloes (17).

Dicephalus monsters have been reported in buffaloes (4, 6, 21) and cows (1, 5, 16). 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. Jones and Hunt (10) 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 (Vit-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 period of embryonic development (day 14 to 42 days), the embryo is highly susceptible to teratogens, and the effect decreases gradually as embryo matures to foetus (13). It is thought that some factors are

responsible for the failure of twins to separate after the 13th day after fertilization (21) that result in conjoined twins.

CONCLUSION

A rare case of conjoint twin monster in buffalo with doubling of external body parts and lack of duplication of some internal organ can be delivered successfully by fetotomy. Fetotomy can offer a good alternative to the caesarean section for reliving fetal monster causing dystocia.

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