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Clinical Article

DYSTOCIA DUE TO CONJOINED TWIN MONSTERS IN MURRAH BUFFALOES

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SUMMARY

Four cases of dystocia due to thoracopagus conjoined twin monster in Murrah buffaloes are reported. Post mortem examination of the conjoined twins revealed the presence of vital organs only in one of the foetus.

Key words: Buffalo, conjoined twin, dystocia

Foetal monstrosities are considered as one of the most common cause of dystocia in bovines (Shukla *et al.*, 2007). Conjoined twin monsters are characterized by duplication of anterior or posterior or both parts of fetal body and are reported to be more common in ruminants. Conjoined twins develop when incomplete separation occurs after the development of the embryonic plate at 8 days and depending upon the site of fusion or non separation, the types of the conjoined twins may differ. Nevertheless, anterior duplication is more often observed in ruminants and swine; occurrence of duplication is about one in 100,000 of the bovine's births.

Four pluriparous full-term pregnant Murrah buffaloes were presented about 12-14 hrs after the rupture of water bag. The animals were severely straining and could not deliver the foetus. On clinical examination, two hind limbs were observed to be protruding through the vulva. Vaginal examination of all the affected animals revealed that in all cases, the foetuses were present in posterior longitudinal presentation with more than two limbs in flexed positions. Further exploration by repulsion and manual manipulations revealed the presence of conjoined twin monsters.

Since delivery by manual manipulation was not possible, therefore it was decided to remove the foetuses by caesarean section in all cases by choosing parallel but lateral to the milk vein as the site of incision. After the caesarean operation, in all the animals parenteral fluid therapy (N.S.S. 4 lts.), calcium (Mifex 450 ml), antibiotics (ceftriaxone+sulbactum-4.5 gm), liver extract (Tribivet 10 ml), Metronidazole (2 gm), analgesic and anti-inflammatory (Meloxicam, 30 ml) drugs were administered daily for 5 days. Antiseptic dressing of the surgical wound was done on alternate day using povidone iodine solution and sutures were removed on day 14 after the operation. All the treated animals recovered without any complication.

After removal, all the conjoined twins were subjected to postmortem examination and it was observed that all were attached with each other at anterior abdomen and in one of the twins the diaphragm was fully developed and the small and large intestines were common to both the foetuses, in all the conjoined monsters. The presence of other organs is described in Table 1.

Twins are monozygotic in origin, and are, moreover, due to incomplete division of one embryo into two components usually at the primitive streak development state (Roberts, 2004). Conjoined twins are non-inherited teratologic defects (Shukla *et al*., 2011). Such abnormal embryonic duplications, resulting in conjoined twins are rare and are not well documented in buffaloes. In this study, it seems to be a non-inherited teratogenic defect of development since there was no history of monster birth

Table 1
Postmortem examination report of foetuses

Organs	1st foetus	2nd foetus
Heart	Present	Absent
Lungs	Present	Absent
Liver	Present (enlarged)	Absent
Spleen	Present	Absent
Kidneys	Present in all the foetuses in two pairs	
Genital organs	Present and normal in all the foetuses	

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Figs 1-4. Conjoint monsters

in the previous calving. Dystocia due to conjoined twin monsters, has been reported earlier in buffalo (Bhoi, 2009; Jerome *et al*., 2010; Ganie *et al*., 2011; Pandey *et al*., 2012) and in cow (Singh *et al*., 2011). In the present study, the foetuses were conjoined at the thoracic region at the sternum with both the heads facing each other. The conjoined twins possessed two abnormal fused heads with separate nostrils, eyes and ears thereby confirming three of the four fetuses to be of dicephalus, distomus, tetraopthalmus, tetraotus, tetrabrachius, tetrapus, and dicaudatus conjoined sternopagus twin monster (Figs. 1-4). Postmortem examination of the conjoined twin monster revealed the attachment at the sternum. Diaphragm was found to be fully developed in one foetus of conjoined monster. The organs such as stomach, intestine, and kidneys were present in three conjoined monsters, besides severely enlarged liver with gall bladder. Similar findings in a buffalo conjoined monster were reported by Shukla *et al.* (2007).

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