

Per-vaginal successful management of a rare case of dystocia in murrh buffalo due to dicephalus thoracophagus tetrabrachius tetrapus and dicaudatus monster: A case report

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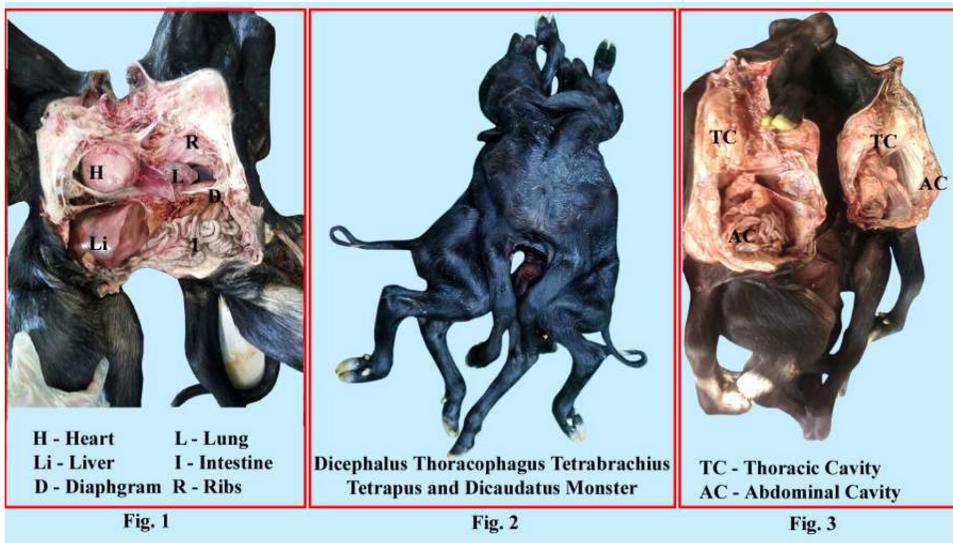
Abstract

First report a case of conjoined twin monster (Dicephalus Thoracophagus Tetrabrachius Tetrapus and Dicaudatus) was delivered by per vaginum without fetotomy in a pluriparous Murrah buffalo. The twin monster consist of two male fetus which were possessed separate set of structure two head, two pairs of forelimb and hindlimbs.

Keywords: First report, Buffalo, Dicephalus tetrabrachius tetrapus throgophagus, Monster

Monstrosities are common in the buffalo (Purohit *et al.* 2011). Monstrosity is a disturbance of the development that involves various organs and systems which can cause great distortion of the individual (Vegad, 2007). Most of the anomalies occur in early stage of cell differentiation when the conceptus is subjected to genetic and maternal influences. The embryonic disk starts to differentiate on the 13th day of conception. If the split occurs after day 13, then the twins will share body parts in addition to sharing their chorion and amnion (Finberg, 1994). Varying degrees of fusion occur; but anterior duplication is more seen in ruminants and swine (Arthur *et al.* 2001). Congenital defect present at birth-the abnormality of structure or function and they may affect a single structure or function, an entire system, part of several systems or a structure

and a function (Marrow, 1980). Duplication of cranial part of the fetus is more common than of the caudal parts (Roberts, 1971). These duplications may arise during the primitive streak elongation or regression (Noden and Lahunta, 1984). Conjoined twins develop after the development of embryonic plate (Whitlock *et al.* 2008). Depending upon the site of fusion or non-separation, the types of the twin may differ viz. thoracopagus (40%), omphalopagus (33%), pyopagus (18%), cephalopagus (2%) and ischiopagus (2%) (Fernando, 1993). In cattle and buffalo the incidence of dystocia is maximum compared to other farm animals (Purohit *et al.* 2011). Dystocia due to monsters is usually relieved by cesarean section since fetotomy is of limited usefulness except in a few monsters. It may be difficult for monsters to pass through the birth canal, either because of their altered shape or because of their relative size.

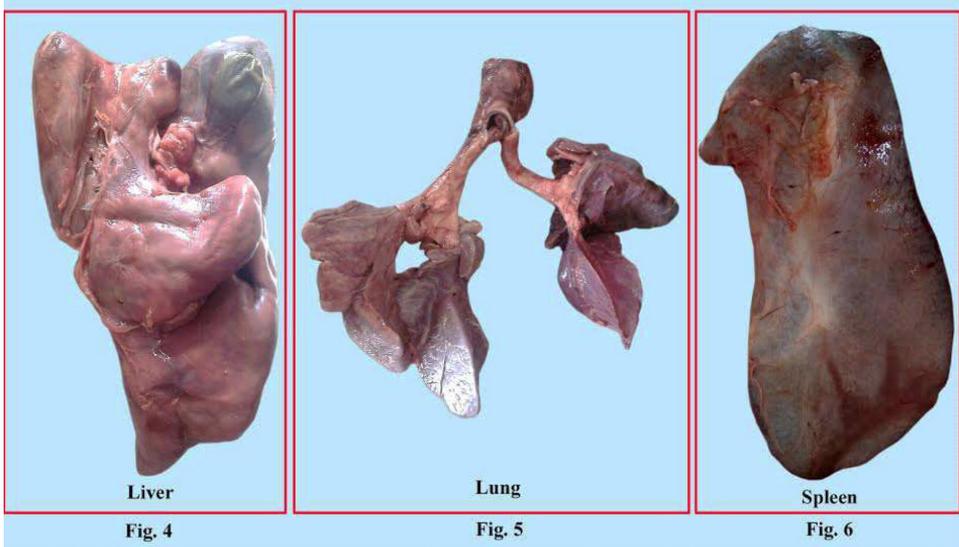


This communication reports a rare case of dystocia caused by a conjoined twin (Dicephalus Thoracopagus Tetrabrachius Tetrapus and Dicaudatus) which was delivered per-vaginum in a female buffalo.

Case History and Clinical Observations

A full-term Murrah buffalo about seven years old in her second parity with dystocia was brought to the Teaching Veterinary Clinical Complex of Veterinary College, Navania. It had a history of straining for the previous 7 to 10 hours but had been unable to deliver the fetus. The gestation period was complete and water bags had been ruptured. On gynaecological examination after proper lubrication it is revealed fully dilated cervix and abnormal fetus

having two head present in the birth canal without any movement in anterior longitudinal presentation, dorso pubic position. Further detailed examination confirmed the presence of two fore limb in anteriorly and other two fore limbs were posteriorly present with joined thorax region resulting dystocia.



As the cervical dilation was proper pervaginal delivery of the double head fetus were attempted in standing position of the animal after proper lubrication. In this progression, one rope is fastened on the one head and the other head was retract by a large obstetrical hook on the right inner canthus of the eye. Traction were applied on the tied rope while keeping another head into the uterus by hook after enough lubrication and meanwhile traction was shifted from one head to the another. Slowly both head of fetus expel from cervix and whole fetuses delivered per-vaginal by traction in forward and downward direction. Thereafter, buffalo was administered with fluids and antibiotics, NSAIDs. Placenta was expelled out during night hours.

Morphological and Anatomical Description

Detailed Morphological examination, of the fetuses reveled that double head, double trunk, double forelimbs, double hindlimbs but conjoined from sternum and separated from lower abdominal region (Fig. 2). The development of male conjoined twins was nearly complete. The twin possessed separate set of structure a double head and neck (Dinocephalic) with normal eyes and ears. The twins were fused in their thoracic regions (Thoracopagus), and had four

front legs (Tetrabrachius), four hind legs (Tetrapus) and two separate tails (Dicaudatus). The condition could be classified as a dicephalus thoracophagus tetrabrachius tetrapus dicaudatus twin monster. The monster weighed 42.2 kg.

On Anatomical examination, conjoined fetus had well developed two forelimbs and two hind limbs each (Fig. 1 and 3). Both fetus had thoracic cavities but only single heart with heart girth of 68.5 cm and separate lungs for each cavities. Common pharynx and larynx with separate trachea for each lungs were present (Fig. 5). In digestive system ill developed stomach and intestine were present. The diaphragm was common for both fetus. Each conjoined fetus had a separate abdominal cavity which communicate with each other. The fetus had a single and enlarged distorted liver (Fig. 4). The spleen was single and enlarged (Fig. 6). The urinary tract was symmetrically divided with a paired kidney in each part. Urinary bladder and genital tract were unable to trace completely but well developed external genitalia present in each hind quarter.

Discussion

Dicephalus monsters have been reported in goats (Pandit *et al.* 1994), buffaloes (Chauhan and Verma, 1995; Raju *et al.* 2000; Bugalia *et al.* 2001; Srivastva *et al.* 2008) and cows (Chandrasahana *et al.* 2003; Patil *et al.* 2004; John Abraham *et al.* 2007). A similar type of monster was reported by Kumar *et al.* (1999), Jerome *et al.* (2010), Gyan Singh *et al.* (2013), having duplication of all body parts. Dystocia due to a dicephalus thoraco-sternopagus Siamese monster (Sahu and Pandit, 1999) and a conjoined twin monster (Selvaraju *et al.* 2002) have been reported as rare cases in buffaloes. A thoraco-sternopagus twin arises due to embryonic duplication of a germinal area whose body structure are partially but not completely duplicated (Robert, 1971). Dystocia due to conjoined twin monsters, though uncommon, has been reported earlier in buffalo (Urankar *et al.* 1994; Dhama *et al.* 2000) and in cow (Honnappagol *et al.* 2005).

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