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## **Monocephalic Sternopagus Tetrapagus Tetrapus Dicaudatus Monstrosity in a Surti Buffalo: A Case Report**

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Dystocia is the common sequel of foetal monstrosities. Teratologic abnormalities or developmental arrests of the ovum, embryo or foetus may result in death or malformations of the antenatal individual. The defect of conjoined twins is non-inherited teratologic, which arises from a single ovum due to incomplete division during the primitive stage development and is monozygotic. Number of factors being influenced by genetic and environmental conditions may cause development of conjoined twins. Various genetic factors were predicted to be responsible for the failure of the separation of twins after the 13<sup>th</sup> day of conception (Srivastava *et al.*, 2008). They are most common in cattle but are seen rarely in sheep, pigs, dogs and cats and are exceedingly rare in horses.

### **Case History and Clinical Observation**

A 6 year old full-term pregnant multiparous buffalo with the history of rupture of the water bag and constant abdominal straining since 4 hours without progression to second stage of labour was presented at the clinic. It had been managed by the local paravet in the beginning but did not facilitate the vaginal delivery. Physical examination revealed normal physiological parameters (rectal temperature, respiratory rate and pulse rate). Further, it was observed that the vulvar lips were oedematous and swollen and one leg of the foetus was protruding out of the vagina. The per vaginal examination following ample lubrication using liquid paraffin revealed foetus in anterior presentation and dorso-sacral position. Since per vaginal delivery was not possible, the foetus was delivered via caesarean section.

### **Treatment and Discussion**

Buffalo was cast on left lateral recumbency and the site was prepared for aseptic paramedian laprohysterotomy. The surgery was carried out under local anaesthesia using 2 % lignocaine and a live conjoined twin foetus was removed (Fig. 1), which however succumbed within a few minutes of birth. The post-operative care of the buffalo included administration of 5 lit of DNS, Inj. 4.5 g ceftriaxone and sulbactam (Cefstan, Intas Pharma) IV, Inj. 10 ml of Meloxicam (Melonex, Intas Pharma) IM and Inj. 10 ml of Vit. B complex (Tribivet, Zydus AH), 10 ml of Cadistin. Four furea bolus were also placed in the uterus. The same antibiotic and analgesic treatment was followed for next 6 days. Regularly antiseptic dressing was carried out using povidone iodine solution and sutures were removed on 10<sup>th</sup> day post-operatively. Buffalo made uneventful recovery (Fig. 2). The

foetal monster of conjoined twin was a male with single head, two pairs of fore limbs, two pairs of hind limbs and two tails. Post-mortem examination of the foetus revealed two heart, two pairs of the kidney and vestigial pelvic organs. The features of conjoined twin calf fall in the classification of monster as monocephalus, sternopagus, tetrapus, tetrabracious and dicaudatus (Roberts, 1971).



Fig. 1: Conjoined monster twin



Fig. 2: Buffalo after operation

Reports of the congenitally conjoined twin foetal monster have been reported by many authors in cattle but rarely in buffaloes (Dhami *et al.*, 2000; Shukla *et al.*, 2011). The aetiology of congenital anomalies is often unknown. However, the important known etiological agents are prenatal infection with a virus, poisonous chemical indigestion by pregnant animal, vitamin deficiency, genetic factors and/or combination of these factors (Jasmer *et al.*, 2016). It occurs once in 100,000 bovine births (Arthur, 1956). Abnormal embryonic duplications resulting in conjoined twins are rare in bovines (Singh and Pandey, 2013). However, the present communication reports a successful clinical management of the conjoined foetal monstrosities in a buffalo.

**Conflict of Interest:** All authors declare no conflict of interest.

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