

## DYSTOCIA DUE TO DICEPHALIC THORACOPAGUS MONSTER IN MARATHWADI BUFFALO: A CASE REPORT

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### ABSTRACT

Conjoined twin is a rarely seen congenital anomaly in domestic animals with severe mortality and morbidity. The more common types of conjoined twins include the thoracopagus type, where the fusion is anterior, at the thorax and sternum. A rare case of dystocia due to a dicephalic thoracopagus monster is reported was relieved by fetotomy in Marathwadi buffalo.

**Keywords:** Marathwadi buffalo, fetotomy, dicephalic thoracopagus, conjoined twin monster, *Bubalus bubalis*

### INTRODUCTION

Conjoined twins are identical twin and joined in uterus during developmental stage. Although uncommon in most herds, inherited congenital anomalies are probably present in all breeds of cattle, and but reports in buffaloes are meager. A monster is an individual having multiple anomalies involving many organs and systems of the body. Fetal anomalies and monstrosities are the most common cause of dystocia in bovines (Shukla *et al.*, 2007). Conjoined twins arise from a single

ovum and are monozygotic. Monsters are mostly encountered in cattle with an overall incidence of one in 100,000 bovine births (Roberts, 1971). 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). These might arise due to genetic and environmental factors.

### CASE HISTORY AND OBSERVATIONS

A pluriparous full-term pregnant Marathwadi buffalo of six and half years old in her second parity was presented to the Teaching Veterinary Clinical Services Complex, College of Veterinary and Animal Science, Udgir Distt. Latur with history of severe straining form the previous 10 to 12 h after the rupture of water bag. Two foetal legs were protruding from the vulva without any progress in parturition. Per vaginal examination revealed that the foetus was in posterior longitudinal presentation, with two hind limbs protruding from the vulva and other two limbs in flexed positions beneath the body.

## TREATMENT AND DISCUSSION

After repulsion and careful palpation it was revealed a conjoined twin monster. The foetuses were dead, and it appeared to be a twin pregnancy as two hind limbs beneath the body of foetus and joined at the thorax region were palpable. Therefore, it was diagnosed as a dystocia due to a conjoined twin monster and a fetotomy was decided performed upon abdominal region of other foetus by applying thygeson's fetotome. Per vaginally wire saw was passed over the separated abdominal region of another fetus and due care were taken for to and fro movement of wire saw for cutting of abdominal part. After systematic cutting of abdominal part of other foetus it was then pulled out side one by one by applying forced extraction through natural opening. A dicephalic thoracopagus monster was delivered with forced extraction through natural opening. The dam was administered systemic antibiotics, anti-inflammatory, ecbolics, calcium boro-gluconate and multivitamins and was kept under observation for another three days.

The twin monster had two well developed normal heads, two necks, two pairs of fore and hind limbs with two separate developed abdominal areas but was joined at thorax (thoracopagus) region of body. Both the foetuses were of female sex. (Figure 1 and 2).

Conjoined or fused symmetrical twins are usually monozygotic in origin and represent incomplete division of one embryo into two components usually at the primitive streak of developmental stage and in the event they may develop into thoracopagus (Noden and Delahunta, 1985). Conjoined twins are always identical twins and of the same sex (Arthur *et al.*, 2001). Such twins are usually due to non-inherited defects and often lead to severe dystocia (Roberts, 2004). 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. Normal per-vaginal delivery of such types of conjoint twins is difficult due to their enlarged and abnormal size resulting in dystocia. The present case study suggested that fetotomy may be the



a



b

Figure 1. (a and b) The dicephalic thoracopagus monster.

treatment of choice in posterior presentation with fetal monstrosities.

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