



## Dystocia due to Breech Presentation of a Dicephalic Fetal Monster in a Buffalo

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### ABSTRACT

A case of dystocia due to breech presentation coupled with bilateral hip flexion in a dicephalic foetal monster having bilateral brachygnathism in a Murrah buffalo was brought to Veterinary Clinical Complex (VCC) of the university which was relieved through obstetrical maneuvers per-vaginally.

### Introduction

Congenital skeletal deformities, also known as dysostoses, are defects arising from fault during pre-natal development and characterized by abnormal growth of foetal bones or part of bones (Noden and de Lahunta, 1985; Singh et al., 2019). The inducing factors for this, may be genetic or environmental (McGirr et al., 1987; Dutt et al., 2018; Dutt et al., 2021). Development of two or more heads (polycephaly) may probably due to partial or complete union of two developing embryos /partial duplication of a body, or to the anteroposterior compression of the embryonic disk. Polycephaly is very rare condition and the affected individual is either still born or dies very soon after the birth (El-Sheikh et al., 2010). Brachygnathism refers to a condition in which mandible is comparatively shorter than maxilla (Kahn, 2010; Mehra et al., 2012). In bovines, incidence of dystocia is quite high than other farm animal species (Dutt et al., 2021). Faulty disposition of fetus has also frequently been reported as a cause of dystocia, out of which posterior presentations occur in 5% of

cases. The aim of the treatment in dystocia due to bilateral hip flexion (breech presentation) is to convert breech presentation into a bilateral hock flexion and then proceed accordingly (Sachan et al., 2014).

The present case study reports a case of dystocia due to bilateral hip flexion of a dicephalic foetus having bilateral brachygnathism and its per-vaginal delivery through obstetrical maneuvers in a Murrah buffalo.

### Case history and Observations

A six years old pluriparous buffalo at full term was brought to VCC of the university with history of abdominal discomfort and straining for last 12 hours. The water bag had ruptured 6 hours ago. The case was handled by local paravet person and referred to VCC Hisar. The rectal temperature (38.5°C), heart rate (84 bpm) and respiration rates (18/min) were within the normal range. Before handling of dystocia, 5 mL of 2% lignocaine hydrochloride was administered epidurally to reduce straining during handling.

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Using liquid paraffin as lubricant, the animal was examined per-vaginally which revealed complete dilatation of cervix and presence of dead fetus in posterior presentation with bilateral hip flexion. Detailed per-vaginal palpation of the fetus revealed duplication of foetal head.

## Treatment and discussion

The foetus was repelled forwards and upwards deep into the birth canal with the aim of bringing the retained hind limbs within reach. The foetal hind limbs were then grasped near to the hock and traction was applied that resulted into hock flexion. Further, the hock flexion was corrected manually and synchronous traction was applied on both the hind limbs. A dead fetus with two heads (dicephalic) having bilateral brachygnathism was delivered (Fig. 1a, b).



Fig. 1a



Fig. 1b

**Figs 1a and 1b.** Dicephalic monster delivered by a buffalo

The placenta got released out of birth canal immediately after delivery of the fetus. After successful delivery of monstrous fetus, animal was administered with injection oxytocin 50 I.U. intravenously in one liter of normal saline solution once to improve uterine defense mechanism, three litres of 5% DNS intravenously for three consecutive days, 450 mL of calcium borogluconate intravenously slowly once and 500 µg of injection Cloprostenol intramuscularly once. In addition to this, injection Ceftiofur Sodium 1g intramuscularly, injection Ergometrine 80 mg intramuscularly, injection Flunixin meglumine 1000 mg

intramuscularly and injection Chlorpheniramine maleate 227.5 mg intramuscularly for five days were recommended. The dam recovered without any post-partum complication.

The monstrous foetus was subjected to radiological examination which revealed duplication of crania and two fused atlases and bilateral brachygnathism (Fig. 2). Besides, the mandibular bodies of both the heads were fused.



Fig. 2. Radiographic image of dicephalic foetus

Brachygnathism, also known as parrot mouth condition is a cranio-facial defect caused by homozygous recessive gene with incomplete penetrance and has been reported to be concurring with other congenital skeletal deformities (Singh et al., 2019; Dutt et al., 2021). Congenital duplication can be defined as imperfectly separated monozygotic twins with subsequent malformations ranging from partial duplication of one part of the body up to almost total formation of 2 fused fetuses (Sinowatz, 2010), and such conditions could be resolved through fetotomy or caesarean section (Long, 2009; Dutt et al., 2019), but in the present case the per-vaginal delivery seemed possible due to complete dilatation of cervix, presence of foetus in posterior presentation, and less manipulation of the case at field level. The preferred line of treatment in cases of breech presentation is conversion of bilateral hip flexion into bilateral hock flexion, then, correction of hock flexion followed by traction. Emphasis shall be given on early diagnosis of monstrosities to avoid economic losses to farmer, stress to the dam and post-operative complications of surgical intervention to the dam.

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