

DYSTOCIA DUE TO FETAL SKELETAL DEFECTS IN A MURRAH GRADED BUFFALO

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ABSTRACT

Present case report deals with a rare case of dystocia due to foetal scoliosis (lateral curvature of lumbar region of vertebral column), dwarfism (short body length) and arthrogryposis (deformed joints of limbs) and its successful management through pervaginum.

Keywords: *Bubalus bubalis*, buffalo, scoliosis, arthrogryposis, Murrah graded buffalo, dystocia

INTRODUCTION

Congenital anomalies and less frequently, multiple congenital anomalies, are reported to be encountered in domestic animals that are present at birth, which in turn may cause obstetrical problems (Arthur *et al.*, 2001). These Congenital abnormalities of foetus with structure and function are present at birth is relatively less frequent in bovines (Rahman *et al.*, 2006). Anomalies occurring due to congenital defects often lead to dystocia. Limb joint deformities like arthrogryposis is caused by an autosomal recessive gene with complete penetrance in the homozygous state (Goonewardene and Berg, 1976). Arthrogryposis is a rare congenital musculoskeletal anomaly and

is seen in all breeds of cattle, with greater incidence in Angus and Charolais breeds (Abbot *et al.*, 1986; Windsor, 2011). The affected calves exhibit joints fixed in abnormal positions and frequently have scoliosis and kyphosis (Shupe *et al.*, 1967; Keeler, 1974). The musculoskeletal defects of the foetus like rigid and fixed limbs in abnormal posture often lead to dystocia (Aiello, 2000; Katiyar *et al.*, 2015). Scoliosis is a condition characterized by abnormal dorsal curvature of a spine and dwarfism is characterized by shortened length of body and limbs (Vegad and Swamy, 2010). The incidence of congenital defects in calves ranges from 2 to 3.5% (Aiello, 2000) of which, musculoskeletal defects account for 24% (Leipold *et al.*, 1983).

CASE HISTORY AND CLINICAL OBSERVATIONS

A pleuriparous Murrah graded buffalo aged about 6 years was presented in clinics with a history of full term gestation. Animal was showing signs of straining for last 12 h and first water bag was ruptured 6 h back. Limbs were visible in vulva when case was presented in clinics. Animal was previously handled by quakes for 2 to 3 h with unsuccessful attempts. Per vaginal examination revealed a fetus with abnormal dorsal curvature

and was presented in posterior presentation with dorso-iliac position. Fetus was matured with short body length and was packed in pelvic cavity. Acute dorso-lateral curvature of vertebral column was preventing the extraction of the fetus. Cervix was completely dilated with no lubrication.

TREATMENT AND DISCUSSION

The buffalo was pre-medicated with inj. Dexamethasone 40 mg, i.m total dose (Zidex; 20 mL; Laborate Pharma Ltd.). Lubrication of birth canal was achieved with heavy Liquid Paraffin (approximately 2 litres) which was followed by snaring of hind limbs at fetlock joint. As the fetus was in dorso-iliac position, it was rotated to dorso-sacral position by holding hind limbs. Fetus was pulled in downward and lateral direction just to create additional gap between pelvic bone of buffalo and scoliotic back of calf. A dead male calf was extracted after forced extraction. The buffalo was treated with Inj. Intacef 4.0 gm (Intas Pharma. Ltd.), Inj. Meloxicam 0.2 mg/kg body wt. i.m (Intas Pharma Ltd.) for 5 days. The fluid therapy was done with inj. Ringer's Lactate (5 litres) and

inj. Normal saline (5 litres) by i.v. route along with supportive therapy for 5 days. Animal Showed uneventful recovery and was discharged after 5 days.

Gross examination of the fetus revealed an abnormal dorso-lateral curvature of spine (Scoliosis) and bending of joints at knee and fetlock joint (Arthrogryposis) (Figure 1). Overall shortened length of both forelimbs and body showed dwarfism. Generally defects of vertebral column such as Kyphosis and scoliosis are observed in ruminants (Rahman *et al.*, 2006) and are responsible for dystocia in these animals (Katiyar *et al.*, 2015) as observed in our case. However other skeletal defects of extremities for example torticollis and arthrogryposis can also cause dystocia in animals as affected fetuses occupy more space in pelvic cavity and are difficult to manage (Mahajan *et al.*, 2006; Singh *et al.*, 2008).

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Figure 1. *Scoliosis and Arthrogryposis* in a buffalo calf.

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