

PER-VAGINAL DELIVERY OF PEROSOMUS ELUMBIS FETUS ALONG WITH ARTHROGRYPOSIS IN SHE-BUFFALO

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ABSTRACT

A rare case of perosomus elumbis fetus with different degree of arthrogryphosis of all four limbs delivered per-vaginally in a she buffalo with complete gestation period.

Keywords: *Bubalus bubalis*, buffaloes, Perosomus elumbis, arthrogryphosis, muscular dystrophy, fetus

congenital malformations is unknown (Kacar *et al.*, 2008). Arthrogryphosis is a congenital malformation characterized by curvature of limbs, multiple articular rigidity and muscular dysplasia (Selvaraju *et al.*, 2009). Present described case was perosomus elumbis with ankylosis of fetal limbs in a she-buffalo.

INTRODUCTION

Anomalies occurring due to congenital defects often lead to dystocia. 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). Perosomus elumbis is an occasionally found congenital anomaly of unknown origin. It is characterized by partial or complete agenesis of lumbar, sacral and coccygeal vertebrae and ankylosis of the hindlimbs (Son, 2008). Because of the complexity of the mechanisms resulting in the development of an anomaly, the precise causative agent of most

HISTORY AND CLINICAL EXAMINATION

A 6 years old she buffalo of 3rd parity was presented with history of full term pregnancy and taking labour pain since last 36 h with unsuccessful delivery of fetus. The previous parturition history was normal. Clinical examination revealed that fully dilated birth canal. The fetus was in anterior longitudinal presentation of with rigid joints of both fore limbs and neck.

TREATMENT AND DISCUSSION

After applying long handle eye hook in the

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Figure 1. All four limbs.



Figure 2. The thoracic region and flexibility of spine after thoracic region.



Figure 3. All the visceral and thoracic organs was normal.

inner canthus of one eye of fetus and obstetrical chain on both fore limbs separately a dead male fetus was delivered with force traction. The dam was uneventfully recovered after giving supportive therapy. Gross examination of delivered fetus revealed different degree of ankylosis of its all four limbs (fore and hind) (Figure 1) on its many of joints, dorsal angulation of spinal cord upto the thoracic region (Figure 2) and flexibility of spine after thoracic region (Figure 2). The neck of fetus was also rigid showing the fixation of cervical vertebrae (Figure 2). In post mortem examination all the visceral and thoracic organs was normal (Figure 3).

Arthrogryposis is a genetic deformity due to autosomal recessive gene with complete penetrance in the homozygous state showing signs of ankylosis of joints, frequently associated with cleft palate, kyphosis and scoliosis (Nawrot *et al.*, 1980). Dystocia caused by fetal ankylosis requires caesarean operation most of time. The motor unit of the skeletal muscle consists of the ventral motor neuron, the neuromuscular junction and the muscle fibre innervated by the neuron. If there is any defect in the lower motor neuron, it will lead to muscular hypoplasia or dystrophy (Leipold *et al.*, 1970).

REFERENCES

- Aiello, S.E. 2000. Congenital myopathies: Myopathies associated congenital articular rigidity (Arthrogryposis). *In Merck's Veterinary Manual*, 8th ed. Merck and W, INC, White House Station NJ, USA.
- Kacar, C., K. Ozcan, I. Takci, K. Gurbulak, H. Ozen and M. Karaman. 2008. Diprosopus, craniorachischisis, arthrogryposis and other associated anomalies in a stillborn lamb. *J. Vet. Med. Sci.*, **70**(5): 521-523.
- Leipold, H.W., K. Huston and S.M. Dennis. 1983. Bovine congenital defects. *Adv. Vet. Sci. Comp. Med.*, **27**: 197-271.
- Nawrot, P.S., W.E. Howell and H.W. Leipold. 1980. Arthrogryposis: An inherited defect in newborn calves. *Austral. Vet. J.*, **56**: 359-364.
- Selvaraju, M., M. Palaniswamy, A. Kumaresan, R.E. Napoleon and C. Chandrahasan. 2009. Dystocia due to arthrogryposis foetus in a crossbred cow. *Indian Vet. J.*, **86**(3): 299-300.
- Son, J.M., H.Y. Yong, D.S. Lee, H.J. Choi, S.M. Jeong, S.W. Lee, S.T. Shin and J.K. Cho. 2008. A case of perosomus elumbis in a holstein calf. *J. Vet. Med. Sci.*, **70**(5): 521-523.