

OBSTETRICAL MANAGEMENT OF CAMPYLORRACHIS SCOLIOSA FOETAL MONSTER IN A NON-DESCRIPT COW

S. RANGASAMY, C. PUGAZHARASI, T.A. KANNAN¹, AISHWARYA DAS², S. MADHUPRIYA², T. SARATH*, C. PRABU³ and T. SATHIAMOORTHY⁴

Department of Veterinary Gynecology and Obstetrics,

¹Department of Veterinary Anatomy, ²Final year B.V.Sc., Madras Veterinary College,

³Department of Veterinary Pathology, Veterinary College and Research Institute, Orathanadu, Thanjavur

⁴Pulikulam Cattle Research Station, Manamadurai, Sivagangai

Tamil Nadu Veterinary and Animal Sciences University, Chennai-600 007, India

Received: 02.11.2020; Accepted: 19.11.2020

SUMMARY

A rare case of dystocia due to Campylorachis scoliosa foetal monster in a four years old non-descript cow and its surgical delivery by caesarian section is reported in this communication.

Keywords: Cow, Caesarian section, Campylorachis scoliosa, Foetal monster

How to cite: Rangasamy, S., Pugazharasi, C., Kannan, T.A., Das, A., Madhupriya, S., Sarath, T., Prabu, C. and Sathiamoorthy, T. (2021). Obstetrical management of Campylorachis scoliosa foetal monster in a non-descript cow. *Haryana Vet.* 60(1): 155-156.

Campylorachis scoliosa is a foetal monster, rarely seen in cattle and swine, characterized by a lateral curvature of the spine and the limbs are usually deformed and ankylosed (Roberts, 1971). Congenital scoliosis is the most frequent congenital deformity of the spine due to a developmental abnormality (Zhu *et al.*, 2017). The absence or partial formation of vertebra or lack of segmentation may cause asymmetrical growth and its resultant deformity (Batra and Ahuja, 2008). It occurs due to anomalies in mesenchymal tissues of vertebrae causing an imbalance in the longitudinal growth of vertebral column (Shyamasunder *et al.*, 2017). The present paper reports a rare case of dystocia due to Campylorachis scoliosa foetal monster and its successful delivery by caesarian section.

A four years old, full term pregnant, pluriparous, non-descript cow was presented to Large Animal Obstetrics Unit, Madras Veterinary College Teaching Hospital with the history of constant straining noticed for the past 24 hours. Clinical examination revealed a congested mucous membrane, 38.9 °C body temperature, 80 beats/min heart rate and dull, depressed behaviour. Per-vaginal examination revealed fully dilated cervix and the foetus was found to be in posterior longitudinal presentation (P1); dorso-sacral position (P2); breech presentation (P3) and the spine was fully deviated with a severe lateral curvature.

Attempts were made to deliver the foetus by mutation and forced traction after sufficient lubrication of the birth canal, however, it failed. Hence, caesarean section on the left lower flank region was performed as per standard protocol. A dead foetal monster was delivered.

*Corresponding author: drsarathvet@gmail.com

The animal was stabilized with intravenous fluids (Ringer's Lactate @ 15 ml/kg body weight) and antibiotics (Metronidazole @ 15 mg/kg body weight I/V and Ceftiofur @ 2.2 mg/kg body weight I/M); anti-histaminics (Chlorpheniramine maleate @ 0.5 mg/kg body weight I/M), anti-inflammatory (Meloxicam @ 0.2 mg/kg body weight I/M) and 50 IU of Oxytocin I/M and continued postoperatively for 7 days except Oxytocin. The skin sutures were removed on the 12th day and animal had uneventful recovery. On detailed examination of the foetus, a severe lateral curvature of the spine was noticed at the junction of T13 and L1 vertebrae (Fig. 1), the right transverse processes of the lumbar vertebrae were under developed and well developed abdominal contents (Fig. 2) were displaced in a pouch dorsal to deviated vertebrae; which were further substantiated with the radiographical examination (Fig. 3). The histopathology of the spinal cord sections both anterior and posterior to the site of lesion revealed normal structure (Fig. 4a & b).

As there was severe lateral curvature of the vertebral column with no evisceration of the abdominal organs, this condition aptly suited the literal meaning of the term decided in this case: Campylo-means curved, rrachis-pertaining to spinal cord, scoliosa-lateral deviation of the spinal cord. Many factors might contribute to the etiology of this case: nutritional disturbances, endocrine disturbances, radiations, BVD-MDV, etc. The viral infections affecting the bovine foetus with bovine virus diarrhoea virus (BVDV), Schmallenberg virus (SBV), blue tongue virus (BTV), Akabane virus (AKAV) is associated with a range of congenital malformations, most prominently in the CNS, and accompanying lesions in the



Fig. 1-3. (1) *Campylorachis scoliosa* fetus with dorsal pouch (red arrow); (2) On Anatomical dissection, pouch contains well developed abdominal organs; (3) *Campylorachis scoliosa*-In X-ray picture showing lateral curvature of spine (red arrow) and pouch with abdominal contents (yellow arrow)

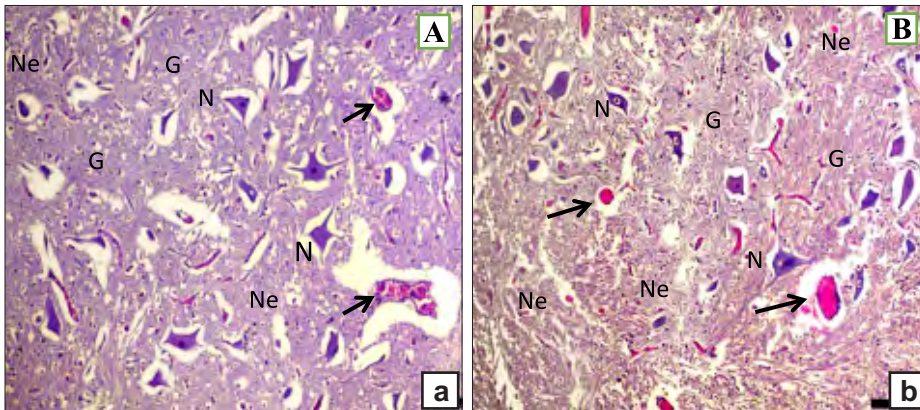


Fig. 4 (a & b). Histopathology section of the spinal cord cranial (4a) and caudal (4b) to the site of lesion showing normal neurons (N), glial cells (G) and neuropil (Ne). Note the presence of few congested blood vessels (arrow) and the normal neurons without any significant pathological changes

musculoskeletal system (Agerholm *et al.*, 2015). Structural abnormalities in the foetus may occur due to developmental abnormalities of ovum, embryo or foetus which leads to monstrosities and mostly occur in early stage of cell differentiation when the conceptus is subjected to genetic and maternal influences (Batra *et al.*, 2015). The common hereditary defects occur due to autosomal recessive genes. Usually, the fetuses with congenital defects are dead at birth and anomalies of musculoskeletal and nervous systems are common in monsters (Purohit *et al.*, 2012). The similar foetal monstrosity condition was also reported by Mohan *et al.* (1996) and Singh *et al.* (2019) in a crossbred cow.

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