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Short Communication

Effective Management of Rare Dystocia due to Diprosopus Monster with Cleft Palate in a Jersey Crossbred Cow under Field Condition

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ABSTRACT

A six years old jersey crossbred full-term pregnant cow was presented with a history of prolonged straining and dystocia. Vaginal examination revealed diprosopus monster calf with bilateral shoulder flexion. The monster calf was delivered per vaginum successfully by traction and the dam recovered uneventfully. The diprosopus fetal monster, characterized by a single neck, trunk, and normal limbs with craniofacial duplication and cleft in the palate was described in the current study.

Key Words: Cleft palate, Cranio-facial duplication, Diprosopus, Double face and Dystocia.

INTRODUCTION

Dystocia is one of the most common obstetrical cases handled by veterinarians in the field and results in the loss of a fetus and dam if appropriate treatment is not given at the proper time. Dystocia may be caused by maternal or fetal origins (Roberts, 2004). Among the fetal origin of dystocia, fetal abnormalities were reported to be 5% of all the dystocias (Arthur *et al*, 2001), whereas the occurrence of fetal monstrosities in cattle was proclaimed to be 0.5% (Purohit *et al*, 2012). A fetal monster is a daunting abnormally large-sized fetus with a hereditary/congenital anomaly (Roberts, 2004). The most common fetal monster encountered was conjoined twins, which arise from partially or completely duplicated fertilized ovum at the mitotic stage. Partial duplication of the craniofacial region with or without the involvement of nasal or oral cavity is called diprosopus or double-faced fetus (Batra *et al*, 2015). Diprosopus fetal anomaly is rare among the fetal monsters reported across the world. So far, diprosopus monster fetus has been reported in cattle (Weber *et al*, 2017), sheep (Mazzullo *et al*, 2003), goat (Mukaratirwa and Sayi, 2006), cat (Sekeles *et al*, 2005) and dog (Mukaratirwa and Sayi, 2006). The current paper describes the dystocia due to craniofacial duplication (diprosopus) with cleft palate and bilateral shoulder dislocation and its successful obstetrical management.

CASE HISTORY

A six years old pluriparous (third parity) full-term pregnant cow, weighing around 300 kg was presented with the anamnesis of dystocia, ruptured water bag, prolonged straining for more than 8-9 hours.

OBSERVATION

The general clinical parameters unveiled normal temperature, pulse rate and respiration rate, edematous vulva with relaxed sacroschiatic ligaments and colostrum oozing from the enlarged mammary gland. Per vaginal examination revealed a fully dilated cervix, dry vaginal cavity, and craniofacially duplicated monster fetus (diprosopus) with no palpable fetal reflexes/movements (absence of suckling and withdrawal reflexes). Further examination revealed that the dead fetus was at the pelvic brim with the anterior-longitudinal presentation, dorso-sacral position and bilateral shoulder flexion. Thus, the case was diagnosed to be dystocia due to a diprosopus fetal monster with shoulder flexion.

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Fig 1: Amputated diprosopus monster calf head

Fig 2: Cleft palate in dead monster calf

CLINICAL MANAGEMENT

The jersey crossbred dam was restrained in such a way that the hindquarter of the animal was raised (by heaping sand and gunny bags) for easy handling of dystocia. Epidural anaesthesia with 5ml of 2% lignocaine hydrochloride was administered at sacro-coccygeal space. The vaginal cavity and fetus was lubricated with an ample amount of lubricant (castor oil). The fetus was repelled back and the shoulder flexion was corrected. Three men traction was applied with rope on both forelimbs and with william's long obstetrical hook on the inner canthus of the right head and the ribs. As the traction was unsuccessful, monster head and the left forelimb of the fetus were amputated and the traction was repeated. The dead calf was delivered successfully along with fetal membranes.

Following the delivery of diprosopus monster fetus, the dam was treated intravenously with Calcium borogluconate (450 ml total dose), 5% Dextrose Normal Saline (DNS-20ml/Kg), Oxytocin @ 30 IU total dose diluted in 500ml Normal saline. Then dam was administered with Flunixin meglumine @ 1.1 mg/Kg i.v. (Megludyne, Virbac Animal Health Ltd., Mumbai, India) Amoxycillin and Cloxacillin @ 10 mg/kg (Intamox, Intas Pharmaceuticals Ltd., Ahmedabad, India), Vitamin b-complex (Tribivet, Intas Pharmaceuticals Ltd., Ahmedabad, India), Chlorpheniramine maleate @ 0.5 mg/Kg i.m. (CPM-VET, Doctor's Life Science (India) Ltd) intramuscularly. The fluid therapy, antibiotics and analgesics were continued for 3 days. Due to the prompt obstetrical management, the dam recovered uneventfully and resumed feeding 7 hours after the treatment.

DISCUSSION

The craniofacial duplication (diprosopus) is a rare fetal monster case reported in buiatric practice. The gross examination of the fetus in the present case, revealed craniofacial duplication, one neck (monauchenos), two eyes each on two faces (tetraophthalmus), duplicated oral and nasal cavity with cleft palate, two tongue, two mandible, two maxilla, two ears on the lateral aspect of the face (no ears on the medial aspect of both faces), single trunk and normal limbs. The thoracic cavity viscera of the monster fetus was found to be exposed due to the traction applied to the ribs by an obstetrical hook. Similar cases were reported in cattle by Pratheepa *et al* (2021), Weber *et al* (2017) and Ozcan *et al* (2005).

In this diprosopus monster fetus, there was a hindrance at the frontal bone development during monozygotic twinning, thus resulting in craniofacial duplication (Long *et al*, 2009). Fetotomy and caesarian section were generally performed to deliver the monster calf dystocias (Sharma *et al*, 1992; Purohit *et al*, 2012). Similarly, amputation and simple traction with rope and the obstetrical hook were applied to deliver the fetus because the dystocia was handled without any complication (no para vet mishandling) and was also attempted as early as possible. In the present case, an added advantage

is the occurrence of dystocia in a pluriparous cow than primiparous, which resulted in the successful management of dystocia.

REFERENCES

Arthur G H, Noakes D E, Parkinson T J and Englang G C W (2001). *Veterinary Reproduction and Obstetrics*, 8th Edn. W.B. Saunders Company Limited, London, 205-216.

Batra K, Tewari A and Chandolia RK (2015). Incidence of fetal monstrosities in India: a review. *Theriogenol Insight* **5**:219-29.

Long S (2009). *Abnormal development of conceptus and its consequences*. In; veterinary reproduction and obstetrics, Noakes. D.E., T.J. Parkinson and G.C.W. England (Eds.). Saunder's ltd. London

Mazzullo G, Germana A, De Vico G and Germana G (2003). Diprosopiasis in a lamb. A case report. *Anat Histol Embryol* **32**:60-2.

Mukaratirwa S and Sayi ST (2006). Partial facial duplication (diprosopus) in a goat kid: clinical communication. *J S African Vet Assoc* **77**:42-4.

Ozcan K and Sozmen M (2009). Diprosopus in a cross bred calf. *Indian Vet J* **82**:650-51

Pratheepa K, Arunkumar C and Vijay K (2021). Dystocia Due to Monocephalus Diprosopus Monster Calf in a Non-descriptive Crossbred Cattle- A Case Report. *Int J Curr Microbiol Appl Sci* **10**: 3510-3512.

Purohit GN, Kumar P, Solanki K, Shekher C and Yadav SP (2012). Perspectives of fetal dystocia in cattle and buffalo. *Vet Sci Dev* **2**:e8-.

Roberts SJ (2004). Veterinary obstetrics and genital diseases. Indian reprints 2004, CBS Publishers and distributors, New Delhi, India. pp. 73-74.

Sekeles E, Aharon DC and Fass U (1985). Craniofacial duplication (diprosopus) in the cat—case report and review of the literature. *Zentralbl Veterinarmed A* **32**:226-33.

Sharma RD, Dhaliwal GS and Prabhakar S (1992). Fetotomy in dystocias due to monstrosities in buffaloes. *Indian J Anim Reprod* **13**: 188-190.

Weber J, Behn H and Freick M (2017). A rare case of monozygotic iniodymic diprosopiasis in a German Holstein calf. *Tierärztliche Praxis Ausgabe G* **45**:296-301.

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