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Dystocia due to *Schistosomus reflexus* fetal monster in a jersey crossbred cow: A case report

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Abstract

A rare case of dystocia due to schistosomus reflexus fetal monster and its obstetrical management in a Jersey crossbred cow was reported.

Keywords: Dystocia, schistosomus reflexus, jersey crossbred cow

Introduction

Congenital anomalies and less frequently multiple congenital anomalies are encountered in domestic animals, which may cause obstetrical problems (Noakes *et al.*, 2002) [6]. *Schistosomus reflexus* is a rare type of congenital disorder, characterized by a marked spinal angulation leading to a distinct ventral curvature of vertebral column, deformed pelvis and the exposed thoracic and abdominal viscera (Roberts, 2004) [9]. In bovines, the incidence is ranging from 0.01 to 1.3% of total dystocia cases, but mostly seen in cows as compared to other species (Laughton *et al.*, 2005) [4].

Case History and Clinical Observation

A pluriparous Jersey crossbred cow in its second parity was presented to the Veterinary Clinical Complex, Veterinary College and Research Institute, Salem with the history of severe straining and water bag ruptured 5 hours before without any progress in parturition. On examination of external genitalia it was found that the fetal viscera was protruding out through vagina (Figure 1). On general clinical examination body temperature of 38.5 °C, respiration rate of 28/min with pink and moist conjunctival mucous membrane was recorded. Vaginal examination revealed completely dilated cervix and edematous vaginal passage. The fetus was in transverse presentation with all the four limbs extended into the vaginal passage with the abdominal viscera protruding out into the birth canal. Based on the vaginal examination the case was diagnosed as dystocia due to schistosomus reflexus monster fetus.

Treatment and Discussion

The perineal region of animal was cleaned with 0.1% potassium permanganate solution. Under low caudal epidural anesthesia with 4ml of 2% Lignocaine hydrochloride with sufficient lubrication of birth passage, the exposed abdominal viscera of the fetus was removed manually. Traction was applied on both the forelimbs and the head with simultaneously repulsion of both hind limbs into the uterus was performed. By traction a dead female schistosomus reflexus fetus was delivered vaginally. The cow was administered with inj. Ringers Lactate 1 litre i/v, Inj. Streptopenicillin 5g i/m, inj. Meloxicam @0.2mg/kg body weight i/m, inj. Chlorpheniramine maleate @0.5mg/kg b.wt i/m, Inj. Oxytocin 30IU i/v after the delivery of the fetus. The treatment was continued for three consecutive days and the animal had an uneventful recovery. Gross examination of fetus revealed that organogenesis was complete. There were a marked ventral curvature of spine and ankylosed fetal limbs (Figure.2). The curvature of the thoracic and abdominal cavities were open and organs like heart, spleen, liver, kidney, stomach, intestine and omentum were exposed. Exposed organs were in normal shape and size.

Schistosomus reflexus is a fetal congenital malformation of bovine fetus whose etiology still remains obscure. However it may be due to genetic factors, mutation, chromosomal anomalies, infectious agents and environmental factors or combination of all the factors affecting the embryo (Noakes *et al.*, 2019 and Barman *et al.*, 2010) [8, 1]. In the developing embryo the lateral edges of somatic disk curve upwards instead of downwards, leading to this anomaly. The occurrence might be due to inheritance of autosomal recessive gene with incomplete penetrance (Laughton *et al.*, 2005) [4]. In a retrospective study, knight (1996) [3] reported that among 90 cases of schistosomus reflexus attended over a period of 20 years, 56.7% were treated by embryotomy, 25.6% by caesarean section and 3.3% by simple traction. Treatment of the remaining 14.4% of cases were considered hopeless mainly because of the emphysematous condition of the fetus and the toxic condition of the cow which gave a poor prognosis and none of the cases reported with normal delivery. Usually small sized monster can be delivered through obstetrical procedure such as application of forced traction using plentiful lubrication of birth canal (Manokaran *et al.*, 2008 and Jana and Jana, 2013) [5, 2]. If failed, must be removed either by fetotomy or cesarean section (Newman, 2008) [7]. In the present case after sufficient lubrication of birth canal and obstetrical mutation techniques pervaginal delivery was successful and it will favour early recovery of dam during postpartum period.



Fig 1: Animal during admission- note the fetus viscera protruding through the external genitalia of dam



Fig 2: Schistosomus reflexus fetus with ventral curvature of spine and exposed thoracic and abdominal viscera

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