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# Dystocia due to *Schistosomus reflexus* in a Jersey Crossbred Cow

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Congenital anomalies, and less frequently multiple congenital anomalies, are encountered in domestic animals, which in turn may cause obstetrical problems (Noakes *et al*., 2002). *Schistosomus reflexus* is characterized by anomaly of the trunk with actual angulation of vertebral column, herniation of abdominal organs and skeleton defects leading to dystocia. Only cases that display both visceral exposure and spinal inversion are considered as true *Schistosomus reflexus* (Laughton *et al.,* 2005). The condition is a type of monstrosity reported most commonly in cattle (Knight, 1996; Kalirajan and Rani, 2016; Prabaharan *et al.,* 2016), buffalo (Kumar *et al.,* 2012), sheep (Mukasa-Mugerwa and Bekele, 1989) and goats (Barman *et al.,* 2010). The prevalence of *Schistosomus reflexus* is believed to occur in cattle from as low as 0.01% (Sloss and Johnston, 1967) to 1.3% (Knight, 1996).

## Case History and Clinical Observations

A Jersey crossbred cow aged 6 years was presented in clinics with a history of continuous straining for last 22-24 hrs and water bag appeared at vulva 16-18 hrs back but there was no progression since then. On per vaginal examination, cervix was found indurated and not fully dilated. Fetus was abnormal with spinal angulation and visceral organs were exposed. Animal was treated for incomplete cervical dilation by local veterinarian but was futile. As the fetus was a monster and cervix was incompletely dilated, caesarean section was done.

Fig.1. *Schistosomus reflexus* calf

## Treatment and Discussion

The cow was pre-medicated with Inj. Dexamethasone @ 40 mg, i/m (Zidex®; 20 ml; Laborate Pharma Ltd), Inj. Haemostrypticum @ 20 ml, i/m (Revici®; 10 ml; Kee Pharma Ltd) and local infiltration anesthesia was achieved by using lignocaine HCl (LOX® 2%; Neon Labs). The left paramedian laparohysterotomy was performed after restraining the animal in right lateral recumbency. The

uterus, peritoneum, muscle and skin were sutured in the routine manner. The cow was treated with Inj. Intamox 4.0 gm, Inj. Meloxicam @ 0.2 mg/kg body wt. i/m (Melonex®; 30 ml; Intas Pharma Ltd) for 5 days. The fluid therapy was done with Inj. Ringer's Lactate (5 litres), Inj. Normal saline (5 litres) by i/v route along with supportive therapy for 5 days. Antiseptic dressing was done on alternate days using Povidone iodine.

The sutures were removed after 10 days of the caesarean section. Gross examination of the foetus (Fig.1) revealed that the organogenesis was complete but the skin, musculature and peritoneum over the viscera behind the xiphoid cartilage were absent. There were marked distension and overgrowth of abdominal organs along with marked skeletal defects of both axial and appendicular skeleton characterized by dorsification of foetal spinal column and marked ankylosis of all four limbs. Arching of the back of the foetus at thoracolumbar junction was noticed. The deformed rudimentary pelvis exposed the viscera organs of abdominal region. Foetal heart was normal in shape and size but the lungs were hypoplastic.

*Schistosomus reflexus* is a fatal congenital malformation of bovine foetus whose etiology still remains obscure. However, it may be due to genetic factors, mutation, chromosal anomalies, infectious agents and environmental factors or combination of all the factors (Noakes *et al.,* 2002). The defining features of *Schistosomus reflexus* include spinal inversion either dorsiflexion or retroflexion of vertebral column with or without ankylosis, exposure of abdominal and/or thoracic viscera owing to severe form of abdominal herniation and hypoplastic lungs. Although the etiology of such congenital anomalies remains unclear, the majority of these anomalies may be related to genetic factors, mutations, chromosomal anomalies, infectious agents and environmental factors or the combination of all these factors (Barman *et al.,* 2010).

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**Conflict of Interest:** All authors declare no conflict of interest.

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