

A RARE CASE OF POUCHED SCHISTOSOMUS REFLEXUS IN A CROSSBRED COW

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ABSTRACT

A rare case of pouched schistosomus reflexus in a Holstein Friesian crossbred cow, which was delivered per vaginum by mutation operation is reported.

Keywords: Cow, Dystocia, Pouched, Schistosomus reflexus Fetus

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Congenital fetal anomalies occur during the embryonic developmental stage in domestic animals (Özsoy *et al.*, 2009). Schistosomus reflexus is a non-genetic and non-inherited congenital fetal anomaly that affects the trunk of the fetus and causing dystocia in ruminants (Ravikumar *et al.*, 2014 and Palanisamy *et al.*, 2018) and swine (Suthar *et al.*, 2011). Perusal of available literature revealed that in rare cases the head and limbs may be enclosed by a complete sac of skin. Hence, the present communication places on record a rare case of pouched schistosomus reflexus fetus in a Holstein Friesian (HF) crossbred cow delivered per-vaginum by mutation operation.

Case history and observation

A full-term pregnant HF crossbred cow in its second parity was brought to Obstetrics

Unit of Veterinary Clinical Complex, Veterinary College and Research Institute, Orathanadu with a history of difficulty in parturition with intestines protruded through the vulva. Clinical examination revealed the cow was dull, depressed and in sternal recumbency. Severe edema and congestion of the vulva was noticed. Vaginal examination revealed dry and edematous vaginal passage and fully dilated cervix.

Fetus was found to be in the birth canal with both the forelimbs extended into the passage and hind limbs also facing towards the birth canal behind the forelimbs. Further careful examination revealed that the limbs were ankylosed and the fetal abdominal contents were exposed out through the vulva (Fig. 1.). The case was diagnosed as dystocia due to fetal monstrosity.

Treatment and discussion

The animal was restrained in the hind quarter elevator for easy handling of dystocia. Epidural anaesthesia was given in

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the sacro-coccygeal space using 3 ml of 2 per cent Lignocaine hydrochloride to prevent pain, straining and defecation. The birth canal was lubricated with liberal application of obstetrical gel for smooth delivery of the fetal monster. Both fore limbs were identified and secured with obstetrical cotton snare, then traction was applied on the head by applying William's long obstetrical hook to move the head out of the vulva. Then, traction was applied on both the fore limbs along with head and with simultaneous repulsion of both hind limbs into the uterus. A dead male fetus was delivered along with its exposed viscera.

Gross examination of the fetus (13.5 kg) revealed acute angulation of the spinal column, ankylosed joints, rigid limbs, exposure of the abdominal viscera and some portions of thoracic viscera (Prakash *et al.*, 2017) because of a fissure in the ventral abdominal wall. The diaphragm was incomplete, lungs were atrophied, distended rumen and all the abdominal viscera were congested and hypoplastic. Fetal monster was diagnosed as *Schistosomus reflexus* as per the description of Roberts (1971). The interesting observation was that both the hind limbs and pelvis were enclosed by a pouch of whitish glistening thick membranous structure (Fig. 2.) with small quantity of amniotic fluid. Incision of pouch revealed that the inner surface was completely covered with hair coat confirming that the membranous pouch was the inverted skin (Fig. 3.). Rai *et al.* (1975) reported a case of *schistosomus reflexus* with encapsulation of head and fore limbs within the reflected skin, whereas Mansour *et al.* (2017) reported *schistosomus reflexus* with

fetal parts completely covered by two separate thick membranous sacs in Egyptian cows. On the contrary, in the present case, pelvis and hind limbs (hind quarter) were enclosed within a separate thick membranous pouch. The inverted abdominal skin might have fused with the opposite side and formed a separate pouch enclosing the hindquarters. Hence, it could be described as pouched *Schistosomus reflexus*.

Schistosomus reflexus is a congenital anomaly characterized by a marked ventral curvature of the spinal column, ankylosed, rigid limbs, malformed pelvis and the body and chest walls bent laterally with exposed thoracic and abdominal visceral organs (Roberts, 1971). Most of the fully-grown *schistosomus reflexus* monsters are usually delivered by fetotomy or caesarean section whereas, in small sized monsters, per-vaginal expulsion with or without any obstetrical assistance is possible (Selvaraju *et al.*, 2020). In the present report, the monster fetus was delivered per-vaginum with obstetrical assistance due to its small size. Following delivery of the fetus, the dam was administered with Inj. 20% Dextrose 1 liter and Inj. Oxytocin 30 IU and Inj. Calcium borogluconate 450 ml, intravenously followed by Inj. Streptopenicillin 5 gm and Inj. Chlorphenaramine maleate 10 ml intramuscularly for 3 days. The dam had recovered uneventfully.

Cutaneous malformation along with the fetal monstrosity is considered to be rare among the congenital anomalies and further studies are needed to arrive at the possible causes for its incidence.



Fig. 1. Fetal abdominal contents protruded through the vulva



Fig. 2. The fetal pelvis and hind limbs are covered by a thick membranous sac



Fig. 3. Schistosomus reflexus monster fetus upon incision of the skin covering the hind limbs and the pelvis. Note the ankylosed joints of hind limbs

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