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Scihostoshomus reflexus (“Inside out calf”)

Schistosomus reflexus is a foetal deformity that occurs in cattle as well as other species. The condition occurs early during embryogenesis (as early as post-gastrulation embryo), resulting in malformation of the foetus. The defects occur due to a failure of a thickened area on the surface of the embryo to curve inwardly and connect. Usually this would form the coelomic cavity. Clinically, this presents as inversion of the spinal column, and a pronounced ventral curvature, consequently the cranium is positioned near the sacrum. There is exposure of the abdominal viscera, sometimes exposure of the thoracic viscera, limb ankylosis and diaphragm hypoplasia. Other potential abnormalities include scoliosis, lordosis, dorsal reflexion of the ribs, non-union of the pelvic symphysis and dorsal reflexion of the pelvic bones. Malformed hepatic, cardiovascular, respiratory, gastrointestinal and urogenital organs are also possible, and on occasion the cranium and limbs may be enclosed in a complete sac.

It has been suggested that the condition of schistosomus reflexus may be inherited in an autosomal recessive manner, as there has been some familial associations. However, current data seems to be insufficient to provide a definitive genetic connection.

Australian data suggests, by proxy of bovine dystocia due to schistosomus reflexus, that the foetal condition is uncommon (1.3% (90) of 6901 cases of dystocia). The condition appears to be more common in dairy cows but may occur in any breed.

If protracted, dystocia can result in an emphysematous foetus and systemically sick animals, consequently euthanasia or slaughter may be required due to the poor to guarded prognosis.

However, if the animal is clinically stable or can be stabilized, successful delivery of the deformed foetus may be achieved vaginally via mild traction and manipulation or foetotomy. Alternatively, a caesarean section can be performed.



Image 1. Crossbred heifer calf and co-twin schistosomus reflexus