

A case report of *Schistosomus Reflexus* in a Lamb

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Abstract

An adult Dorper ewe was presented to the Large Animal Clinic with dystocia. Reddish masses were seen hanging from the vulva of the ewe. Vaginal examination revealed a deformed fetus in the pelvic cavity that left insufficient room for fetal manipulation. A tentative diagnosis of dystocia due to fetal deformity was made. The dystocia was relieved by cesarean section and a case of true schistosomus reflexus in a lamb was confirmed from physical examination of the defective fetus.

Introduction

Schistosomus reflexus is an extreme closure defect of the abdominal cavity that is associated with skeletal defects and usually it is encountered as an obstetrical problem. The condition is reported most commonly in cattle (Roberts, 1986), but it may be observed rarely in sheep (Smith, 1969; Dennis, 1972; Mukasa-Mugerwa and Bekele, 1989) and goats (Bedford, 1967). Only cases that display both visceral exposure and spinal inversion are considered as true schistosomus reflexus (Laughton et al., 2005). Congenital defects in sheep are probably more common than reports indicate. Cases of defective lambs are probably rarely reported unless the number is high. This means that many sporadic cases, which would include many genetic defects, are not reported (Dennis and Leipold, 1986). Because of the rarity of documented cases of the condition in sheep, this paper reports a case of true schistosomus reflexus that was encountered in the University of Nairobi Large Animal Clinic.

Case History, Findings and Management

A farmer from Ruiru location, Thika district in Kenya, brought a case of difficult lambing in an ewe to the University of Nairobi Large Animal Clinic. The adult Dorper ewe in her second

pregnancy was at term. Labour had started in the early morning and the ewe had not lambed by mid-day and had reddish masses hanging from the vulva.

On examination, the ewe was in good condition and was relatively alert. The visible mucous membranes were of normal color, but body temperature was slightly raised (39.6° C), and the pulse and respiratory rates were normal. Fetal intestines and liver were protruding from the vulva. These organs were congested. The ewe was straining without success. Digital vaginal examination was performed on the ewe and this revealed a deformed fetus that was engaged in the pelvic cavity. A diagnosis of dystocia due to fetal deformity was suggested. Attempts to manipulate the fetus and relieve the dystocia by traction were not fruitful due to insufficient room in the pelvic cavity.

A decision was taken to correct the dystocia by caesarean section, which was performed using standard procedures (Morrow, 1986). Briefly, the ewe was restrained in right lateral recumbency and the left flank prepared for aseptic technique. The fetal masses hanging from the vulva were also cleaned with warm water and antiseptic. Local anesthesia was achieved by infiltrating 35 mls of 2% lignocaine HCl (Lignocaine and Adrenaline injection, Lincoln Pharmaceuticals Ltd, India) using the inverted L block method. Aseptic procedures were observed. An incision of approximately 15 cm was made through the abdominal wall and into the peritoneal cavity. A longitudinal incision was made on the dorsal curvature of the right uterine horn, through which the fetus was extracted as an assistant pushed the parts hanging from the vulva back into the pelvic cavity. The fetal membranes were then removed, and the uterine and abdominal incisions closed using routine surgical principles. Postoperatively, the ewe was administered 8 mg

of dexamethasone (Glucortin-20, Interchemie, Holland) intramuscularly (I.M.) as a single dose and 1000 mg of procaine penicillin and 1,250 mg of dihydrostreptomycin (Pen and Strep, Norbrook Laboratories Limited, Northern Ireland) I.M. for the next three days. The removed fetus was malformed. The thoracic and abdominal cavities of the fetus were not closed, exposing thoracic and abdominal viscera, and its spine was inverted displaying a distinctive ventral convex curvature. The malformed fetus was diagnosed to be a true case of schistosomus reflexus (Figure 1).

Discussion

The present report is a documentation of a case of true schistosomus reflexus in a Dorper ewe that was associated with dystocia. Schistosomus reflexus is a rare kind of fetal monstrosity seen primarily in cattle (Knight, 1996), ranging in prevalence from a low of 0.01% to a high of 1.3% (Knight, 1996) of bovine dystocias. This fatal congenital syndrome is characterized by the presence of exposed abdominal and sometimes thoracic viscera (schistosomus), and marked spinal inversion producing a distinctive ventral convex curvature reflexus (Roberts, 1986). The condition belongs to the family of defects involving incomplete closure of the ventral body wall. The 'schistosomus' aspect of the syndrome, i.e. the presence of a congenital schistocoelia, is manifested in many species (Bishnoi et al., 1987; Pivnick et al., 1998). Conversely, the 'reflexus' component of the disorder is limited to only a few species.

Relatively few ovine schistosomus reflexus case reports have been presented in the literature (Smith, 1969; Dennis, 1972; Mukasa-Mugerwa and Bekele, 1989.). Moreover, in the published reports, including those of other species, conflicting understanding of the criteria for a case of schistosomus reflexus is evident. Previously, several cases were categorized as schistosomus reflexus, but lacked the 'reflexus' component, i.e. the presence of spinal inversion (Iyer, 1983; Mukasa-Mugerwa and Bekele, 1989). Only cases displaying both visceral exposure and spinal inversion should be considered as true schistosomus reflexus (Laughton et al., 2005). The present report is an account of a true schistosomus reflexus lamb. It is important to document even sporadic cases of fetal defects as they may be heritable.

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Figure 1: A case of schistosomus reflexus in a lamb showing exposed abdominal (A: intestines) and thoracic (B: heart) viscera due to failure of closure of abdominal and thoracic cavities, and marked spinal inversion producing a distinctive ventral convex curvature.