

DYSTOCIA DUE TO HYDROCEPHALIC FOETUS IN AN EIGHTEEN-MONTH OLD YANKASA EWE: A CASE REPORT

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ABSTRACT

A case of dystocia due to a hydrocephalic foetus in a one-and-a-half-old Yankasa ewe is reported. The ewe had delivered the first lamb at home and later presented with straining. A hard mass was felt in the abdominal cavity during physical examination. Assisted delivery through manual traction was unsuccessful due to an oversized foetus. A caesarean section was performed, and the ewe was delivered of a dead hydrocephalic foetus. The case highlights the importance of early diagnosis and appropriate intervention in managing dystocia due to foetal hydrocephalus.

Keywords: Caesarean section, Dystocia, Foetal monster, Hydrocephalus, Yankasa ewe

INTRODUCTION

Hydrocephalus is a congenital condition characterized by an abnormal accumulation of cerebrospinal fluid within the cranial cavity, leading to an enlargement of the head (Perrotte *et al.*, 2022). Hydrocephalus in sheep can have various causes, including genetic factors, in utero exposure to infectious agents, toxic substances, or deficiencies (Masucci *et al.*, 2012; Perrotte *et al.*, 2022). In lambs, congenital hydrocephalus can occur sporadically and may be linked to genetic or environmental factors such as infections or deficiencies (Masucci *et al.*, 2022). In some cases, hydrocephalus in sheep can be associated with severe cerebral hypoplasia or hydranencephaly caused by in utero viral infections, leading to compensatory forms of hydrocephalus (Masucci *et al.*, 2022). Additionally, teratogenic viruses are identified as the primary cause of congenital hydrocephalus in ruminants, while in dogs and cats; hydrocephalus can be congenital or associated with impaired skull and vertebral growth (Schmidt & Ondreka, 2019).

Dystocia, which refers to difficult or abnormal labour, can be associated with foetal monsters such as hydrocephalus, leading to challenging deliveries and potential complications

for both the ewe and the lamb. Yusuf *et al.* (2013) reported the occurrence of dystocia due to foetal hydrocephalus in a Yankasa ewe, which was resolved through caesarean section. Dystocia, which refers to difficult or abnormal labour, can be associated with foetal monsters such as hydrocephalus, leading to challenging deliveries and potential complications for both the ewe and the lamb. Yusuf *et al.* (2013) reported the occurrence of dystocia due to foetal hydrocephalus in a Yankasa ewe, which was resolved through caesarean section. The lamb born with significantly enlarged head relative to body size and limb ankylosis died shortly after birth, with dystocia attributed to the enlarged head obstructing the birth canal. Early diagnosis and appropriate intervention are crucial in managing dystocia due to foetal hydrocephalus to ensure the survival of both the dam and the foetus.

CASE PRESENTATION

A one-and-a-half-year-old Yankasa ewe was presented to the veterinary clinic with a history of straining for several hours. The ewe had successfully delivered one lamb at home without complications. Upon examination, the vital parameters were: rectal temperature: 40.5°C, respiratory rate:



55 cycles /min, capillary refill time: 4 seconds; in addition, the ewe exhibited signs of distress and discomfort.

Figure I: The dead hydrocephalic lamb

Clinical examination revealed a good body condition score (3 out of 5), with a PCV of 33%. Abdominal palpation revealed a hard mass in the abdominal cavity. The ewe was restless and frequently attempted to lie down with intermittent straining. Other clinical signs observed included congested mucous membrane, absence of rumen motility, nasal or ocular discharges' and ecto-parasite on the body of the animal.

Tentative diagnosis was dystocia due to an oversized foetus. Assisted delivery through manual traction was attempted but failed due to the size of the foetus. Therefore, a caesarean section was indicated to relieve the dystocia.

SURGICAL INTERVENTION

Given the failure of manual traction to deliver the foetus and the continued straining of the ewe, a caesarean section was conducted.

SURGICAL PROCEDURE

The ewe was sedated using xylazine (0.1 mg/kg IV) and positioned on a right lateral recumbency. A sterile field was established by shaving the left flank region and disinfecting with povidone iodine solution. The area was draped in a rectangular fashion exposing the proposed incision site. Local anesthesia (10 mL of lidocaine 2%) was administered at the incision site. A 5cm incision was made through the skin and abdominal wall using a scalpel blade separating the abdominal muscles along the line of the fibres and eventually

incising the peritoneal sheath. The gravid uterus was identified and carefully exteriorized through the abdominal incision. A longitudinal incision was made on an intercotylidary space on the uterus to access the uterine cavity. Upon opening the uterus, a dead hydrocephalic foetus was found. The cranial vault was significantly enlarged due to fluid accumulation as shown on Figure I.

After foetal exteriorisation, the uterine incision was closed with double layer of Cushing suture pattern using absorbable sutures (chromic catgut size 2). The abdominal wall was closed "en masse" closure (peritoneum and muscles) using simple continuous suture pattern with size 2 chromic catgut. The skin was closed using interlocking suture pattern with size 2 silk.

POSTOPERATIVE CARE

The ewe was monitored postoperatively for signs of recovery from anaesthesia and potential complications such as infection or haemorrhage. Penstrep-400® (Procaine penicillin- 200,000 IU and Dihydrostreptomycin- 200 mg) injection was administered (dosages: 20,000 IU/kg and 10 mg/kg, respectively) intramuscularly for five days post-surgery.

DISCUSSION

In this case, the ewe's history of assisted delivery and the presence of a hard mass in the abdominal cavity during examination raised suspicion of a potential foetal abnormality. Hydrocephalus can cause dystocia due to the enlarged foetal head, which becomes too large to pass through the birth canal. Surgical intervention through caesarean section allowed for successful resolution of dystocia despite the unfortunate outcome for the foetus. The management of dystocia in small ruminants requires careful assessment and prompt action to minimize risks to both the dam and offspring.

Yusuf *et al.* (2013) reported a similar case of dystocia due to an enlarged head in a Yankasa ewe, where caesarean section successfully relieved the condition despite initial attempts at manual delivery being unsuccessful. In their case, the lamb was delivered alive but died shortly after due to severe malformations. Divya *et al.* (2017) reported dystocia in a non-descript ewe caused by external hydrocephalus, which was managed successfully through caesarean section followed by an uneventful recovery.

The findings from this case underscore the necessity for early diagnosis of dystocia and prompt surgical intervention when foetal abnormalities are suspected. The use of imaging techniques such as ultrasound could enhance diagnostic accuracy and guide management decisions in future cases.

CONCLUSION

This case report illustrated the critical nature of recognizing and managing dystocia due to foetal hydrocephalus in ewes. Early intervention through caesarean section is vital for improving outcomes for both the ewe and potential offspring. Further studies are warranted to explore preventive measures and enhance management protocols for dystocia related to foetal malformations.

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