



Fetal dystocia and estimation of fetal age in Sheep

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ABSTRACT

A non-descript primiparous sheep of unknown gestation was presented with a history of difficulty in parturition and foul smell bloody vaginal discharge. Vaginal examination revealed dead fetus in anterior longitudinal presentation with carpal flexion retained in the birth canal. Based on the gynaeco-clinical examination, the case was diagnosed as dystocia due to carpal flexion. Further, the fetal age of the lamb was calculated using the formula given by Richardson (1980) as 130 days. The present case study deals with the successful management of dystocia due to carpal flexion and its estimation of fetal age in a non-descript sheep.

Key words: Crown-anus length, Dystocia, Carpal flexion, Lamb.

How to cite :- Singh, L. K., Singh, U., & Singh, P. (2023). Fetal dystocia and estimation of fetal age in sheep. *The Indian Journal of Animal Reproduction*, 44(2), 104–106. 10.48165/ijar.2023.44.02.21

INTRODUCTION

Dystocia in small ruminants is less as compared to large animals (Jackson, 2004). Dystocia can result from either maternal dystocia or fetal dystocia (Noakes, 2009). Fetal dystocia due to malpresentation of lamb comprises 75% of dystocia in sheep (Mostefai *et al.*, 2019). The most common malpresentation includes deviation of the head, shoulder or carpus, breech presentation or simultaneous presentation of lambs (Jackson, 2004). Failure of the uterus to expel the fetus i.e. uterine inertia is reported in ewes with metabolic diseases such as hypocalcemia, pregnancy toxemia

and endocrine disturbances such as consumption of estrogenic compounds (Barbagianni *et al.*, 2015). Richardson *et al.* (1980) have shown that long bone length (conveniently radius and tibia) is a reliable indicator of fetal age from 50 days of gestation to term in the sheep, and may be obtained radiographically in the living fetus or by postmortem measurement. Further, he calculated the fetal age of the lamb as Lamb X = 2.1 (Y + 17), where X is the developmental age in days and Y is the crown–anus length in centimeters. Thus, the present communication deals with the successful management of dystocia due to carpal flexion and its fetal age estimation in a non-descript sheep.

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Received 23-05-2023; Accepted 30-11-2023

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CASE HISTORY AND OBSERVATIONS

A non-descript primiparous sheep weighing 25 kg of aged 1-year-old with an unknown gestation period was presented to Veterinary Clinical Complex, International Institute of Veterinary Education and Research, Haryana, India with a history of non-progression of labor since 24 hrs (Fig.1). The sheep had a history of rupture of the first water bag for the past 12hrs. The rectal temperature of the sheep was recorded as normal. Per vaginal examination revealed a dead fetus in anterior longitudinal presentation with carpal flexion retained in the birth canal. The case was diagnosed as dystocia due to carpal flexion posture.



Fig. 1: Non-descript sheep presented with dystocia

TREATMENT AND DISCUSSION

Under 2% lignocaine injected epidurally in sacrococcygeal space, the ewe was restrained in standing position. The perineal region of the ewe was washed with potassium permanganate solution followed by lubrication of birth canal with liquid paraffin. The dead fetus was pushed inside the birth canal and correction of the flexed carpal joint was done manually. Mild traction was applied around the lower forelimb and dead fetus was removed. Similarly, another female dead fetus was also removed manually with mild traction (Fig. 2).



Fig. 2: dead fetuses removed through traction

The placenta was expelled within 5 minutes of fetal delivery and deposition of 2 furex boli was done inside the uterus. Further, the ewe was treated with intramuscular injections of Enrovet @ 2 ml, Avilin vet @ 2 ml, Beejet @ 2 ml, Meloxi @ 2 ml and calBD @ 2 ml for the next 3 days and the ewe had an uneventful recovery. The fetal age of the lamb was calculated using the formula given by Richardson (1980) as $Lamb\ X = 2.1(Y + 17)$, where X is the developmental age in days and Y is the crown-anus length in centimeters. The measurement of crown-anus length on the fetus was done using a scale and recorded as 45 cm. So, the final age of the fetus was calculated as 130 days.

Dystocia is reported to occur more in small first parity ewes (Jacobson *et al.*, 2020). The premature death of the lamb (130 days) in association with dystocia due to carpal flexion posture in the present case may favor dystocia. Similarly, Purohit *et al.* (2006) reported the incidence of postural abnormalities ranged from 63 to 69 % in sheep. Failure of the initiation of birth and subsequent dystocia may result from fetal death in utero (Jackson, 2004). The reason for in utero death may be caused by compromised placental function, infection, exposure to toxic agents, metabolic disease, stress, or congenital defects (Jacobson *et al.*, 2020).

CONCLUSION

The present case study reports the successful per vaginal delivery of a fetal dystocia and its estimation of fetal age in non-descript sheep.

ACKNOWLEDGEMENTS

The authors are highly thankful to the Chairman and Dean, International Institute of Veterinary Education and Research, Rohtak, Haryana for providing facilities to conduct the study.

CONFLICT OF INTEREST

None

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