

## FETAL MUMMIFICATION IN A NON-DESCRIPT DOE AND ITS SUCCESSFUL MANAGEMENT

L. Kipjen Singh<sup>1\*</sup>, W. Pipelu<sup>2</sup>, G.K. Mishra<sup>3</sup> and M.K Patra<sup>4</sup>

<sup>1\*</sup>Phd Scholar, Animal Reproduction, Gynaecology & Obstetrics, National Dairy Research  
Institute, Karnal-132001, Haryana, India

<sup>2</sup>M.V.Sc Scholar, Division of Veterinary Surgery

<sup>3</sup>Ph.d Scholar, Animal Reproduction Division

<sup>4</sup>Scientist, Animal Reproduction Division

ICAR-Indian Veterinary Research Institute, Izatnagar- 2431 22, U.P. India

E-mail: laishramkipjen04@gmail.com (\*Corresponding Author)

**Abstract:** Fetal mummification is uncommon in small ruminants like goat and sheep. The present case describes successful delivery of a mummified fetus in a non-descript doe after administering valethamate bromide and prostaglandin. Manual traction recovered the fetus from the fully dilated cervix. The chocolate brown coloured deposits on the fetal mass showed haematinic type of mummification. Proper care and therapeutic management helped prompt recovery of the doe.

**Keywords:** Mummification, goat, fetus, dystocia, manual traction.

### Introduction

Goat being one of the highly fertile animals among the domesticated animals provides meat, milk, fibers, cashmere and leather. Being a small size ruminant, management and rearing are usually done easily by poor farmers and household women. Fetal mummification is less frequently encountered in doe and ewe (Robert, 1971; Noakes *et al.*, 2009). It affects both singleton and twin fetuses. It is characterized by death of the fetus and fetus being retained in uterus owing to the failure of normal parturition or abortion mechanisms (Arthur *et al.*, 1989). The general cause for mortality of the fetus include genetic defects, torsion or compression of the umbilical cord, placental defects or infections during the second or third trimester of gestation after the formation of the placenta and substantial ossification has occurred (Roberts, 1971). Successful treatment depends upon correct diagnosis of the causes, time of death of fetus and duration of dystocia (Aziz and Taha, 1996). Information on fetal mummification in doe is very rare due to its fewer occurrences. The present case report describes the successful delivery of fully developed mummified fetus in a non-descript doe.

*Received Jan 21, 2018 \* Published Feb 2, 2018 \* www.ijset.net*

## Materials and methods

### Case History

A 3 years old non-descript doe was presented to VGO wing of Referral Veterinary Polyclinic, Indian Veterinary Research Institute, with the history of foul smell vaginal discharge, inappetence and labor straining since last 2 days.

### Clinical observation

The animal was dull and depressed. The physical examination revealed the heart rate and respiration rate were 100 beats per minutes and 25 breaths per minutes respectively. The rectal temperature was recorded as 103.2°F. Abdominal palpation and radiographic examination revealed the presence of fetus in the reproductive tract. Per vaginal examination showed the partially dilated cervix with one finger opening.

### Therapeutic management

The perineum of the doe was scrubbed and cleaned with antiseptic solution. The doe was administered with 4ml valethamate bromide and 125 mcg of prostaglandin intramuscularly and waited until cervix was fully open. After half an hour of drug administration, per vaginal re-examination revealed a dead fetus in anterior presentation with forelimbs extend into birth canal. The fetus was tried removing per vaginally but failed at first few attempt but with excessive lubrication a fetus was delivered by manual traction. The fetus appeared chocolate brown in colour with viscous adhesive covering the fetal mass and absence of fetal eyeballs confirmed haematinic type of mummified fetus (fig.1). All the debris was removed and intrauterine cleaning of uterus was done with cleanex bolus. The animal was maintained with 5% DNS 500 ml I/V, systemic antibiotic @ inj. Enrofloxacin 5 mg/kg body weight I/M, anti-inflammatory @ Inj. Meloxicam 0.3 mg/kg body weight I/M routinely and supportive calcium supplement orally for 5 days. The animal recovered gradually consumed normal diet and resumed normal health.

### Discussion

Fetal mummification is uncommon in goat and appears, like dystocia (Mathew *et al.*, 1980; Tutt, 1991). Mummified fetus retained in the uterus for a prolonged period retarded the health of the animal and need veterinarian involvement. In this case PGF<sub>2</sub> $\alpha$  showed a better response in expulsion of mummified fetus by promoting myometrial contractions and producing leuteolytic effects. Prostaglandins (PGF<sub>2</sub> $\alpha$ ) are the primary and most effective treatment for expulsion of retained mummified fetus (Wenkoff and Manns, 1997). Valethamate bromide, being a primary cervical dilator is normally used for cervical dilatation

in case of hard cervix and inadequate cervical dilatation. Singh *et al.* (2017) have suggested the beneficial effect of epidosin (valethamate bromide) in case of incomplete cervical dilatation. In the present case both the drugs compensate each other function to bring about successful delivery of the fetus. Moreover, the fetus in the present study was observed without eye ball and ear which might be due to resorption of skin and subcutaneous layers and further found to be covered with chocolate brown colour viscous adhesive which resembled to typical body configuration of haematinic type of mummified fetus as reported earlier by Noakes *et al.* (2009). These diagnosed the case as haematinic type of fetal mummification. In addition, fetal mummification in goats is also associated with persistent CL. The dependence on progesterone (P4) produced by the CL for maintenance of pregnancy also supports retention of mummies (Mathew *et al.*, 1980). Several authors (Tutt, 1997; Edmondson *et al.*, 2012; Luedke, 1985) also reported that various infectious diseases such as toxoplasmosis, Chlamydia, border disease and Coxiella were responsible for causing fetal mummification. The present case of fetal death might be due to an unknown cause and failure of the cervical dilatation for abortive mechanism which results in dystocia and onset of the mummification process. The present condition has been successfully treated with the combined action of prostaglandin and valethamate bromide and other supportive therapy. Thus, the present paper describes the successful management of fetal mummification in a non-descript doe.



**Fig.1: Mummified fetus delivered by manual traction**

## References

- [1] Arthur, G.H., Noakes, D.E. and Pearson, H. 1989. *Veterinary Reproduction and Obstetrics*. 6th edn. London, Bailliere Tindall. 114.
- [2] Aziz, D.M. and Taha, M.B. 1996. Dystocia in Awassi ewes: causes and treatments a review. *Iraqi Journal of Veterinary Science*.**9**: 1-12.
- [3] Edmondson, M.A., Roberts, J.F, Baird, A.N., Bychawski, S. and Pugh, D.G. 2012. Theriogenology of sheep and goats. In: Pugh DG, Baird AN, editors. *Sheep and Goat Medicine*. 2nd ed. Maryland Heights (MO): Elsevier Saunders :150–230.
- [4] Luedke, A.J., 1985. Effect of bluetongue virus on reproduction in sheep and cattle. *Progress in clinical and biological research*.71-78.
- [5] Mathew, J., Madhavan, E. and Iyar, C.P.N.1980. *Livestock Adviser*. **80**: 61–65.
- [6] Noakes, D.E., Parkinson, T.J. and England, G.C.W. 2009. *Arthurs' Veterinary reproduction and obstetrics*, 9th edition, Saunders, Edinburg, London.
- [7] Roberts, S.J. 1971. *Veterinary obstetrics and genital diseases* (2<sup>nd</sup> edn.) CBS Publishers and Distributors.
- [8] Singh, L.K., Pipelu, W., Mishra, G.K. and Patra, M.K. 2017. Clinical management of dystocia due to incomplete cervical dilatation in goat. *Int.J.Sc.Env.T*. **6**: 3477 – 3483.
- [9] Tutt, C.L.1991. Postpartum mummification of a co-twin fetus in a Cameroon dwarf goat doe. *Vet Rec*.**140**: 229–231.
- [10] Wenkoff, M.S and Manns, J.G. 1997. Prostaglandin-induced expulsion of bovine fetal mummies. *Can Vet J*.**18**:44–45.