

Case Study

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## Retention of Foetal Membranes in a Non-Descript Doe: A Case Report

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### ABSTRACT

#### Keywords

Retention, Foetal membranes, Post-partum

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Retention of foetal membranes is one of the major post-partum complications in dairy goats which confer negative impact both on health of the animal and economy of the farmer. The current case report describes about the successful treatment of Retention of foetal membranes in a non-descript doe by application of manual traction and other supportive therapies.

### Introduction

Retention of foetal membranes (RFM) is one of the major periparturient complications among the reproductive disorders in dairy goats which negatively influence health, reproductive efficacy and welfare of the animal (Ahmed *et al.*, 2006; Djuricic *et al.*, 2015). It causes significant economic losses in the herd due to decreased milk production, treatment cost and decreased market value of the animal if not treated adequately and promptly. In does, RFM is defined as the failure of the foetal membrane expulsion within 6–8 h after kidding (Noakes *et al.*, 2009; Samardzija *et al.*, 2010). Normally the

foetal membranes are expelled 1–4 h after kidding. Immediate Veterinary attention is essential if the expulsion is not made within 12 h (Matthews, 2009) as contraction of the uterus and closure of the cervix will soon prevent manual removal of the RFM. The reported incidence of RFM ranged from 2 to 10% depending on herd (Durrani and Kamal 2009; Mude *et al.*, 2010; Ameen and Ajayi, 2013; Djuricic *et al.*, 2015) which shows the case as a rare occurrence. Expulsion of fetal membrane being the third and final stage of parturition depends on various factors mainly the hormonal level. The hormonal processes that lead to the normal placental separation are multifactorial and begun before parturition

(Beagley *et al.*, 2010). Collagenases are proteolytic enzymes that have a crucial role in the foetal membrane release, by breaking the peptide bonds in collagen (Noakes *et al.*, 2009). Several authors recommended different method of therapies for RFM although the efficacy of many of these treatments is questionable. Current evidence does not support manual removal as an effective treatment for RFM however it is still commonly practiced (Peters and laven, 1996; Drillich *et al.*, 2006, 2007). Thus the present report describes the management of Retention of foetal membranes in a non-descript doe.

### **Case history and clinical observations**

A non-descript doe aged 3 years old with unknown parity was reported to VGO wing of Indian Veterinary Research Institute with the history of kidding one day earlier and persistence of foetal membranes hanging from the vulva. The doe had delivered two live fetuses by manual traction with the help of local veterinarian. Further the owner complaint that the doe loss appetite since the day of kidding.

The doe was observed to be weak, emaciated, dull and depressed with abnormal foul vaginal discharge. Physical examination reveals normal temperature, normal heart, pulse rate and respiration rate. Soiled fetal membrane (Fig. 1) was seen hanging from the vulva which diagnosed the case as retention of fetal membranes where the fetal membrane failed to expel within certain period after the parturition of fetuses.

### **Therapeutic management**

Being in dull, depressed, weak and anorexic condition the doe was first stabilized with avil @ 5 mg/kg and 0.9% normal saline solution. After stabilization and bringing the animal in a relieved condition, the treatment was further

planned after keen observation of the exposed foetal membranes.

The perineal region and exposed part of foetal membranes of the doe was cleaned with 1% KMnO<sub>4</sub> solution and using soft cotton the region was dried off to prevent microbial invasion into the uterus. The foetal membranes were noticed to be adhered loosely to the uterine portion and slight manual intervention possibly will remove the fetal membrane remnants. So, carefully mild gentle traction was applied on the fetal membrane remnants and the foetal membranes came off easily with a tug (Fig. 2) after being detached from the uterine caruncles. Following the removal of the retained foetal membranes, one and half cleanex boli was placed pervaginally into the uterus to avoid secondary bacterial contamination and to eliminate uterine debris which could have lead to metritis affecting the normal health and future fertility of the animal.

The doe was further treated with meloxicam @ 0.5 mg/kg intramuscularly for 3 days to provide anti-inflammatory, anti-exudative, analgesic and anti-pyretic effects, broad spectrum antibiotic Enrofloxacin @ 5 mg/kg intramuscularly for 5 days to combat the current infection and prevent further bacterial multiplication, uterine cleanser uterotone was given orally @ 20 ml for 5 days b.i.d for expulsion of remnants of fetal membranes and mineral mixture @ 10gram orally for 5 days to supplement the loss minerals and improve the health. The doe regain health and started to consume normal diet and recovered uneventfully within the following weeks as reported by the owner.

### **Discussion**

RFM in farm animals is a serious post-parturient disorder which occurs when the final stage of parturition is delayed.

**Fig.1** Photograph showing the retained foetal membranes hanging from the vulva of the doe



**Fig.2** Photograph showing the remnants of the foetal membranes after removal



The RFM is probably less health problem in does than in cows, inspite of the fact that the RFM prevalence in some cow and goat herds was similar (Djuricic *et al.*, 2015). Several studies have not supported the use of hormones as a general treatment for RFM (Garcia *et al.*, 1992; Stevens *et al.*, 1997, Drillich *et al.*, 2005). RFM have been associated with increased risk for endometritis, metritis, ketosis, and mastitis in such animals where the placenta is not removed (Schukken *et al.*, 1989; Bruun *et al.*, 2002; Melendez *et al.*, 2003). So, the present case describes about the successfully manual removal of the foetal membranes and other supportive therapy thus prevents the dire consequences of prolonged retained foetal membranes. Manual removal of the foetal membranes remains a common practice despite numerous studies fail to demonstrate a beneficial effect on reproductive performance (Drillich *et al.*, 2006, 2007) similarly manual removal remains method of choice for the present case too. In this case, RFM might be due to lack of proper nutrition supplement during the dry period and during term which in turn is associated with difficulty in delivery of fetuses under normal condition. Hanafi *et al.*, 2011 reported that RFM occur usually following dystocia, maternal hypoimmunity, mal and unbalanced nutrition, stress, hereditary predispositions or infections, which is in agreement with the present case where dystocia is a part of history and emaciated body condition shows improper nutrition. It can be concluded that proper nutrition and management can resolve the problem of retention of fetal membrane in farm animals, thus saving the economic losses and promoting better health and fertility of the animals.

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