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Successful obstetrical management of fetal maceration in a non-descript doe: A case report

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Abstract

A 3 years old non-descript goat in her third parity was presented to Teaching Veterinary Clinical Complex, Obstetrical Unit, Tirunelveli with the complaint of blood mixed vaginal discharge since 2 days. As per the history, animal had completed five months of gestation. There was foul smelling reddish grey in colour discharge coming out from the external genitalia. On obstetrical examination, cervix was dilated and pieces of fetal bony parts were palpated in the vaginal passage as well in the uterus. Fetal bones were successfully removed per-vaginally after proper lubrication with carboxy methyl cellulose. Post-obstetrical radiograph showed absence of remnants, bony structures in the uterus. The doe was recovered uneventfully without any further complications.

Keywords: Bony parts, carboxy methyl cellulose, cloprostenol sodium, douching, goat, maceration

Introduction

Post-mortem changes in the fetus may hamper the normal parturition process which included fetal mummification, maceration and emphysema (Roberts, 2004) [1]. Among the three, fetal maceration has been reported in almost all the species however, it is rare in goats. The fetus was to be died *in-utero* and failed to expel from the uterus and retains which culminated to putrefaction and autolysis leaving only bones that remain floating in the uterus (Noakes *et al.*, 2009) [2]. Maceration is a common sequel of fetal mummification and occurs in the event of fetal death after formation of fetal bones, it would be after 100 days of gestation in sheep and goat (Bashiru *et al.*, 2020) [3]. Treatment included manual removal of bony pieces through pervaginum (Rautela *et al.*, 2016) [4] or C-section (Bashiru *et al.*, 2020) [3]. The present paper was documented the fetal maceration in a five months pregnant doe.

Case History and Clinical Observation

A 3 year old non-descript doe weighing 30 Kg was presented to Teaching Veterinary Clinical Complex, Obstetrical Unit, Tirunelveli with the history of bloody vaginal discharge since past 2 days. As per the owner history, animal had completed 5 months of gestation. On physical examination animal appeared active, alert and continuous straining was observed. On clinical examination revealed congested conjunctival mucous membrane and other vital parameters were normal. Mated hair present in and around the perineum was clipped neatly followed by thoroughly perineum cleaned with potassium permanganate solution. Per-vaginal examination revealed there was foul smelling reddish grey colour discharge coming out from external genitalia. On detailed obstetrical examination, cervix was dilated and pieces of fetal bony parts were palpated in the vaginal passage as well in the uterus. Hence, the case was diagnosed as fetal maceration as cause of gestational accident.

Treatment and Discussion

The doe was stabilized with Inj. Ringers Lactate (150 ml, I/V), Ceftriaxone + Sulbactam (20 mg/Kg, I/V), Chlorpheniramine maleate (0.2 mg/Kg, I/M). Birth canal thoroughly lubricated with Carboxy methyl cellulose solution by using 60 ml syringe. After proper lubrication, the fetal bony parts of the fetus were cautiously removed manually (Figure 1 and 2). Post-obstetrical radiograph showed absence of remnants, bony structures in the uterus. The doe was administered with single dose of Cloprostenol sodium (125 mcg, I/M) to expulsion of contents and Tetanus toxoid (0.5 ml, I/M). Douching was performed by using 2 ml of Povidone iodine in 20 ml of Metronidazole. Owner was advised to continue the antibiotic, anti-histaminic and douching for five more days.

The doe was recovered uneventfully without any further complications.

Fetal maceration occurs after 3 months of gestation, by which time fetal bones are fairly well developed, especially in small ruminants it would be after 100 days of gestation (Bashiru *et al.*, 2020) [3], but in the present case the doe was completed 5 months of gestation. More commonly fetal emphysema and maceration follow fetal death and beginning abortion in which the cervix had dilated, but the fetus was not expelled due to failure of the genital tract to dilate sufficiently or failure to contract normally or because of fetus was dead and in an abnormal position and posture (Purohit and Gaur, 2011) [5]. Possibly this statement true with the present case, might lead the development of the maceration of fetus which retained in the partially dilated cervix. In rare instances, fetal emphysema and maceration may be associated with uterine torsion during gestation (Roberts, 2004) [1], accident (Chakraborty *et al.*, 2018) [6] and iatrogenic uterine perforation (Bashiru *et al.*, 2020) [3], in the present case no history of accident was reported by the owner, however animal appeared dull, depressed and pyretic at the time of presentation which might be suggestive of infectious origin responsible for occurrence of fetal death followed by maceration in this case. Bone pieces were cautiously removed manually after through lubrication with CMC solution as procedure described by Rautela *et al.* (2016) [4] who also removed the bony pieces per-vaginally after proper lubrication. The doe was recovered uneventfully without any further complications in this present case might be due to cautiously removed the fetal bone pieces, post-obstetrical radiograph examination, intra-uterine douching with Povidone iodine and Metronidazole combination and single dose of Cloprostenol sodium to expulsion of contents.



Fig 1: Bone pieces removed manually through pervaginum



Fig 2: Bone pieces were washed using tap water for demonstration and preservation

Conclusion

The present case was recorded fetal maceration in doe. On obstetrical examination, cervix was dilated and pieces of fetal bony parts were palpated in the vaginal passage as well in the uterus. Bony pieces were removed per-vaginally after proper lubrication. The doe was recovered uneventfully without any further complications.

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