



ISSN: 2456-2912

VET 2023; 8(6): 82-84

© 2023 VET

www.veterinarypaper.com

Received: 16-08-2023

Accepted: 25-09-2023

A Thangamani

Assistant Professor, Department of Veterinary Gynaecology and Obstetrics, Veterinary College and Research Institute, Tamil Nadu Veterinary and Animal Sciences University, Chennai, Tamil Nadu, India

A Reshma

Assistant Professor, Department of Veterinary Gynaecology and Obstetrics, Veterinary College and Research Institute, Tamil Nadu Veterinary and Animal Sciences University, Chennai, Tamil Nadu, India

R Rajkumar

Assistant Professor, Veterinary Clinical Complex, Veterinary College and Research Institute, Tamil Nadu Veterinary and Animal Sciences University, Chennai, Tamil Nadu, India

S Manokaran

Associate Professor and Head, Department of Veterinary Gynaecology and Obstetrics, Veterinary College and Research Institute, Tamil Nadu Veterinary and Animal Sciences University, Chennai, Tamil Nadu, India

T Sarath

Associate Professor and Head, Veterinary Clinical Complex, Veterinary College and Research Institute, Tamil Nadu Veterinary and Animal Sciences University, Chennai, Tamil Nadu, India

A Elango

Dean, Veterinary College and Research Institute, Tamil Nadu Veterinary and Animal Sciences University, Chennai, Tamil Nadu, India

Corresponding Author:

A Thangamani

Assistant Professor, Department of Veterinary Gynaecology and Obstetrics, Veterinary College and Research Institute, Tamil Nadu Veterinary and Animal Sciences University, Chennai, Tamil Nadu, India

An unusual case of cloudburst condition in a doe and subsequent fertility: A case report

A Thangamani, A Reshma, R Rajkumar, S Manokaran, T Sarath and A Elango

Abstract

A four year old pluriparous goat was presented with the history of not showing kidding signs even after completion of term, except udder development and milk secretion. On abdominal palpation no fetus was palpable, however fluid filled uterus was palpated. Trans-abdominal ultrasonographic examination revealed extensively distended anechoic fluid filled uterus without detectable placentomes and fetal parts. Based on the date of mating history, absence of kidding signs, gynaeco-clinical examination and trans-abdominal ultrasonography the case was diagnosed as hydrometra. The doe was administered with cloprostenol sodium intramuscularly. Doe was responded to the treatment and showed cloudy vaginal discharge. It became cyclic within a month after treatment. Doe was allowed for mating and scanning 45 days of post-mating found positive for pregnancy with twins.

Keywords: Goat, hydrometra, cloud burst, cloprostenol sodium, ultrasonography, twins

Introduction

Hydrometra is an anestrus condition in which clear to cloudy aseptic fluid accumulates in the uterine horns with the persistence of corpus luteum (CL) and absence of fetal parts and placentomes (Almubarak *et al.*, 2016) [1]. Hydrometra is found to be one of the main cause of infertility in dairy goats (Souza *et al.*, 2013) [2]. The causes of this condition is still unclear, however many authors reported that occurrence of hydrometra may be due to failure of fertilization process, production of high concentration of progesterone from corpus luteum, cessation of cyclical activity during breeding season, stenosis or obstruction in the birth canal like cervix, vagina and hyperestrogenism and also by increased parity of the dam have been responsible for the development of condition (Nascimento and Santos, 2003, Noakes *et al.*, 2009 and Almubarak *et al.*, 2016) [3, 4, 1]. Clinical signs associated with hydrometra conditions are bilateral distention of abdomen, mammary gland enlargement and milk secretion and also anestrus for five to six months (Almubarak *et al.*, 2016) [1]. Diagnosis of the condition is very difficult in the field level but would be possible with trans-abdominal ultrasonography. The goal of the treatment of hydrometra condition is luteolysis by prostaglandin derivatives and future fertility of the dam was poor to good depending upon the duration of existence of condition. The present case recorded hydrometra condition and subsequent fertility in pluriparous goat by ultrasonography.

Case History and Clinical Observation

A four year old pluriparous goat was presented to the Veterinary Clinical Complex, Veterinary College and Research Institute, Salem with the history of not showing kidding signs even after completion of term, except udder development and milk secretion. On general clinical examination all the vital parameters were within the normal range except, distention of abdomen. On abdominal palpation it was not able to palpate the fetal structure however there was fluid filled uterus was palpable. Further the trans-abdominal ultrasonography (B-mode, 3.5-5 MHz, curvilinear probe, Easote) was performed for detailed examination of uterine contents. Ultrasonography revealed extensively distended anechoic fluid filled uterus without detectable placentomes and fetal parts (Figure 1). Based on the mating history, absence of kidding signs, gynaeco-clinical examination and trans-abdominal ultrasonography the case was diagnosed as hydrometra/cloudburst.

Treatment and Discussion

The doe was administered with injection cloprostenol sodium (125 microgram, Pragma) intramuscularly. Doe was responded to the treatment and showed cloudy vaginal discharge (Figure 2 and 3). Discharge submitted for bacterial culture which showed no bacterial growth. The doe was returned to estrus within a month post treatment. Doe was allowed to natural service and found positive for pregnancy on 45th day of post mating (Figure 4).

Incidence of hydrometra occur in older does and was not common in yearlings (Noakes *et al.*, 2009) [4], in the report can it was observed in four year old pluriparous goat. Purohit and Mehta (2012) [5] opined that etio-pathological concepts behind the hydrometra condition were failure of fertilization, secretion of high concentration of progesterone from corpus luteum, cessation of estrous cycle during breeding season and also by parity of the dam. Stenosis or obstruction in the birth canal like cervix, vagina and hyperestrogenism have been responsible for the development of condition (Nascimento and Santos, 2003) [3]. However, the etiology of the present case was still not clear, owner reported that the doe was mated with same herd mates and delivered healthy young ones in previous pregnancies. This might be due to ageing of the dam predisposed for hydrometra condition. As per the ultrasonographic description of the earlier reports of Hensenlink and Taverne (1994) [6] and Pieterse and Taverne (1986) [7] distended uterine horn with anechoic to hypoechogenic fluid accumulation with absence of c-shaped placentomes and fetal structure suggestive of hydrometra. In the present case also observed fluid accumulation in the uterus with absence of fetal structures and placentomes.

The goal of the treatment involves lysis of the corpus luteum and evacuation of contents from the distended uterine horns. In this case we used luteolytic dose of cloprostenol sodium (125 microgram) intramuscularly and successfully evacuated the uterine contents. The discharge appeared to be cloudier at the time of evacuation. Discharge was submitted for bacterial culture, but culture showed no development of bacterial colony in agar medium. Hence the case was confirmed as hydrometra/cloudburst condition. The doe was returned to estrus within a month after post treatment. It was allowed for natural service and scanning on performed 45th day of post-mating showed compartmentalization of uterine horn, occupied with anechoic fluid and presence of hypoechogenic two fetuses visualized. Similar to this study, Almubarak *et al.* (2016) [1] also recorded hydrometra in goat who treated the case with cloprostenol sodium (125 microgram) and observed cloudy vaginal discharge after 36 hrs of post treatment and also confirmed pregnancy 60th day of post mating with triplets.



Fig 2: Doe expelled vaginal discharge after treatment



Fig 3: Examination of cloudy vaginal discharge



Fig 4: Positive for pregnancy on 45th day of post mating after treatment (twin fetuses)



Fig 1: Anechoic fluid accumulation in the uterine horns without fetus and placentomes

Conclusion

A goat was diagnosed with hydrometra using ultrasonography and successfully managed with administration of cloprostenol sodium. Post treatment mating confirmed the animal as pregnant in 45th day post mating.

Acknowledgment

The authors thank the Dean, Veterinary College and Research Institute, Salem, TANUVAS for necessary facilities and support to document the report for publication.

Conflict of Interest

No conflict of interest.

References

1. Almubarak AM, Abdelghafar RM, Badawi ME. Hydrometra in a goat - diagnosis, treatment and subsequent fertility. *International Journal of Livestock Research*. 2016;6(4):114-118.
2. Souza JM, Maia AL, Brandao FZ, Vilela CG, Oba E, Bruschi JH, *et al.* Hormonal treatment of dairy goats affected by hydrometra associated or not with ovarian follicular cyst. *Small Ruminant Research*. 2013;111:104-109.
3. Nascimento EF, Santos RL. *Physiology of Animal Reproduction*; c2003. p. 52.
4. Noakes DE, Parkinson TJ, England GCW. *Arthur's Veterinary Reproduction and Obstetrics*, 8th Edition, W.B. Saunders Company; c2009. p. 570-571.
5. Purohit GN, Mehta JS. Hydrometra in goats (*Capra hircus*): Clinical analysis of 26 cases, *Ruminant Science*. 2012;1(2):117-119.
6. Hesselink JW, Taverne MAM. Ultrasonography of the uterus of the goat. *Veterinary Quarterly*. 1994;16(1):41-45.
7. Pieterse MC, Taverne MAM. Hydrometra in goats: diagnosis with real-time ultrasound and treatment with prostaglandins or oxytocin. *Theriogenology*; c1986. p. 813-821.