

HYDROMETRA IN A DECCANI EWE AFTER OESTRUS SYNCHRONIZATION AND ARTIFICIAL INSEMINATION

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SUMMARY

Hydrometra is a rarely encountered clinical condition in sheep which causes temporary infertility. This case study reports hydrometra in a Deccani sheep. Echographic examination of uterus revealed thin uterine wall with hyperechoic trabeculae traversing through intrauterine anechoic fluid. Large volumes of fluid was voided (cloudburst) from uterus within 48 h post treatment with single injection of cloprostenol 125 mcg (PGF_{2a} analogue) and ewe conceived successfully 30 days postbreeding.

Key words: Hydrometra, oestrus synchronization, artificial insemination, embryonic death

Hydrometra or pseudopregnancy is a common disease of the genital tract in goats (Moraes *et al.*, 2007) but rarely encountered in sheep with an incidence of 0.3% in Awassi sheep (Moghaddam and Gooraninejad, 2007). The condition is characterized by accumulation of aseptic fluid into the uterus and presence of persistent corpus luteum on the ovaries upon spontaneous ovulation or after oestrus synchronization (Lopes-Junior *et al.*, 2004). The etiology and pathophysiology is always associated with high progesterone levels, fertilization failure, cessation of cyclical activity and variable degree of abdominal distension (Noakes *et al.*, 2009). Purohit (2006) reported 14.3% incidence of hydrometra in goats. Lower incidence (2.9%) was recorded in Rambouillet and crossbred Rambouillet-Booroola Merino range ewes (Bretzlaff, 1993). Incidence of hydrometra in Deccani sheep has not been reported so far. The present case reports hydrometra in Deccani ewe after oestrus synchronization and artificial insemination.

The case study was conducted at Livestock Farm Complex (LFC), Rajendranagar, Hyderabad (Latitude - 17.3203° N, Longitude -78.4018° E). The Deccani ewe (Fig. 1) aged 3 years was brought for pregnancy diagnosis which was subjected to estrus synchronization followed by artificial insemination 30 days back.

On clinical examination, rectal temperature was found to be 102.4°F and heart and respiratory rates were normal. On abdominal ballottement, fluid filled uterus without any palpable fetal parts was felt. Ultrasonographic examination using a trans-abdominal (B-mode) probe

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(frequency-5.0 MHz) was performed by placing the animal in dorsal recumbency. Echographic examination of uterus revealed thin uterine wall, lack of embryo and placentomes and hyperechoic trabeculae traversing through intrauterine anechoic fluid (Fig. 2). Thus, the case was diagnosed as hydrometra. Ewe was treated with single injection of cloprostenol 125 mcg (PGF_{2a} analogue). Large volume of fluid was voided (cloudburst) from uterus within 48 h post treatment and animal showed signs of oestrus after 3 days of treatment. Thirty days post breeding, the ewe was confirmed by pregnant by ultrasonography (5 MHz, Tans-rectal Real time B-Mode). The present case was differentiated from pyometra due to absence of hyper-echogenic cellular debris and thick uterine wall, which is a typical characteristic feature in pyometra. Moreover, thin uterine wall and presence of intrauterine anechoic fluid confirmed the condition to be hydrometra. Moraes *et al.* (2007) reported that pseudopregnancy in goats may occur post mating, characterized by conception followed by early embryonic death with persistent corpus luteum, or post estrus without breeding but the incidence of hydrometra after oestrus synchronization and A.I has rare occurrence in sheep. The present case evidenced that hydrometra in Deccani sheep can occur after oestrus synchronization and artificial insemination which is similar to the finding in Blackhead Plevel sheep (Yotov *et al.*, 2009).

Salles and Araujo (2008) reported that pseudopregnancy in dairy goats could be treated with a single dose of PGF₂ alpha which was in accordance with the present study where the ewe returned to oestrus



Fig 1. Deccani ewe diagnosed with hydrometra 30 days after fixed time AI protocol



Fig 2. Sonograph of uterus in ewe showing hyperechoic trabeculae traversing through intra-uterine anechoic fluid

after treatment with single dose of PGF_2 alpha. In a study, Moraes *et al.* (2007) diagnosed hydrometra in does (n = 11), treated them with PGF_2 alpha and the animals were found positive for pregnancy after 30 days of mating. Similarly, in the present case study ewe conceived successfully and confirmed pregnant by ultrasonography (Trans-rectal, B-mode) after 30 days of post-breeding.

Hydrometra or cloudburst can prevail upto 120-150 days (Taverne, 2010) incurring loss to farmer. Therefore, it is recommended that ultrasonographic examination at 30 day post-breeding is essential for early and accurate diagnosis of pseudopregnancy in Deccani sheep.

REFERENCES

- Bretzlaff, K.N. (1993). Development of hydrometra in a ewe flock after ultrasonography for determination of pregnancy. *J. Am. Vet. Med. Assoc.* **203**(1): 122-125.
- Lopes-Junior, E.S., Cruz, J.F., Teixeira, D.I.A., Lima Verde, J.B., Paula, N.R.O. and Rondina, D. (2004). Pseudopregnancy in Saanen goat (*Capra hircus*) raised in Northeast Brazil. *Vet. Res. Commun.* **28**: 119-125.
- Moghaddam, A. and Gooraninejad, S. (2007). Abattoir survey of gross abnormalities of the ovine genital tracts in Iran. *Small Ruminant Res.* **73**: 259-261.
- Moraes, E.P.B.X., Santos, M.H.B., Arruda, I.J., Bezerra, F.Q.G., AguiarFilho, C.R., Neves, J.P and Lima, P.F. (2007). Hydrometra and mucometra in goats diagnosed by ultrasound and treated with $\text{PGF}_2\alpha$. *Med Vet (Brasil)*. **1**: 33-39.
- Noakes, D.E., Parkinson, T.J. and England, G.C. (2009). Veterinary Reproduction and Obstetrics. (9th edn.), WB Saunders, Elsevier.
- Purohit, G.N. (2006). Hydrometra (Pseudopregnancy) in goats. *Indian J. Field Vet.* **1**(3): 42-43.
- Salles, M.G.F. and Araujo, A.A. (2008). Pseudopregnancy in milk goat: case report. *Vet. Zootec.* **15**: 251-256.
- Taverne, M.A.M. (2010). Overview of Pseudopregnancy in Goats. In: The Merck Veterinary Manual. Kahn, C.M. (edt). (10th edn.), Merck & Co. Inc, White House Station, New Jersey, USA.
- Taverne, M.A.M., Hesselink, J.W., Bevers, M.M., Van Oord, H.A. and Kornalijnslijper, J.E. (1995). Aetiology and endocrinology of pseudopregnancy in the goat. *Reprod. Domest. Anim.* **30**: 228-230.
- Yotov, S., Dimitrov, D. and Fasulkov, I. (2009). Hydrometra in a sheep after oestrus synchronization and insemination in the anoestral season. *Slov. Vet. Res.* **46**(4): 143-147.