

ULTRASONOGRAPHIC DIAGNOSIS AND TREATMENT OF HYDROMETRA IN JAMNAPARI GOATS

C. JAYAKUMAR^{1*}, G. SUDHA², S. KANTHARAJ¹ AND K. LAKSHMIKANTH¹

Department of Veterinary Gynaecology and Obstetrics
Veterinary college, Hebbal, Bangalore

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ABSTRACT

The clinical diagnosis of hydrometra in two Jamnapari goats was carried out by ultrasonography and the cases were successfully treated with a single dose of PGF_{2α}.

Keywords: Goat, Hydrometra, PGF_{2α}

INTRODUCTION

Hydrometra is characterized by accumulation of aseptic fluid in the uterine lumen in the absence of fetuses and placentomes, but with a persistent corpus luteum (Wittek *et al.*, 1988). An incidence of 2-20% was reported with adults have more incidence of the condition than maiden females (Hasselink, 1993). The occurrence of pseudopregnancy and hydrometra is a synonym condition although others have suggested difference between the two conditions (Smith, 1980). Nevertheless, two types of conditions are reported for pseudopregnancy or hydrometra. In first condition named as 'cloud burst', mating follows fertilization and then early embryonic death. The corpus luteum persists and the doe acts like a pregnant. At the termination of prolonged luteal phase, the accumulated fluid is discharged. In the second condition, the doe in estrus is usually not mated and there is cessation of cyclical ovarian activity. At the end of acyclicity, affected does expel a bloody discharge without marked hydrometra. The present report in Jamnapari goats records diagnosis and treatment of two clinical cases of hydrometra.

CASE HISTORY AND OBSERVATIONS

A nulliparous Jamnapari goat (age, 2 year) was presented with abdominal distension and no history

of breeding. The other pluriparous goat (age, 4 year) had the history of breeding and was presented for the diagnosis of pregnancy. In both the goats, on abdominal palpation, no fetal skeletal parts were appreciable. Trans-abdominal ultrasonography examination using a 5 MHz transducer evinced very large non-echogenic fluid compartments in the uterine lumen, separated by double-layered thin tissue walls in the absence of fetal echoes or placentomes and the condition was diagnosed as hydrometra (Figure 1). The blood samples were collected and serum progesterone analysis carried out by ELISA technique revealed that both the goats had elevated serum progesterone (10.4 and 11.7 ng/ml respectively).

TREATMENT AND DISCUSSION

The failure to detect the presence of fetal membranes in the non-echogenic fluid compartments separated by double layered thin tissue walls in the absence of fetus and placentomes in both the cases gave the confirmatory diagnosis as hydrometra, as reported earlier (Hasselink and Taverne, 1994). It can be further suggested the failure of conception or fetal resorption might have occurred. The mechanism of establishment of hydrometra is either the spontaneous persistence of corpus luteum after ovulation without fertilization or the corpus luteum persistence following fetal mortality and fetal resorption. The presence of elevated serum progesterone in both the goats

¹Ph.D. Scholar, ²Assistant Professor; *jayvetog@gmail.com

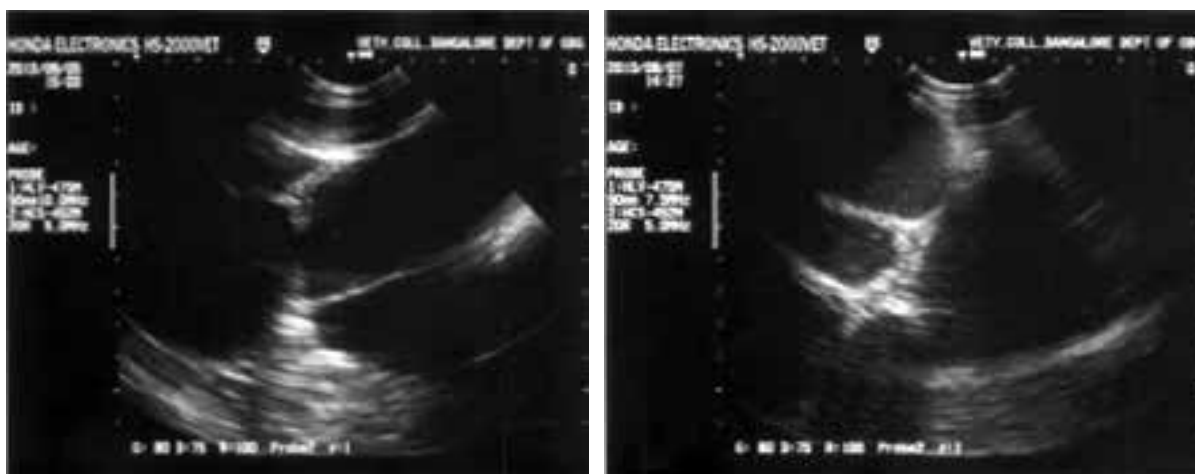


Figure 1: Ultrasonographic images showing fluid filled compartments in the absence of fetal structures in two Jamnapari Goats.

confirmed the persistence of corpus luteum. Others reported that blood progesterone concentration in goats with hydrometra was always above 2 ng/ml (Wittek *et al.*, 1988).

Following confirmation of hydrometra, Inj cloprostenol sodium, (125 µg, IM) was administered to each of the goats. It was suggested that only 41% goats had complete uterine drainage following single PGF_{2α} treatment and the remaining goats required second dose of PGF_{2α} (Hesselink, 1993). However, in the present reports, following single PGF_{2α} treatment, uneventful recovery with complete drainage of uterine fluid was noticed within 48-60 h in both the goats. This was further confirmed by trans-abdominal ultrasonography that evidenced normal uterine image.

REFERENCES

Hesselink, J.W. (1993). Hydrometra in dairy goats: reproductive performance after treatment with Prostaglandins. *Vet. Rec.*, **133**: 186-187.

Hesselink, J.W. and Taverne, M.A.M. (1994). Ultrasonography of the uterus of the goat. *Vet. Quat.*, **16**: 41-45.

Smith, M.C. (1980). Caprine production. In: Morrow, D.A. (ed.): *Current Therapy in Theriogenology: Diagnosis, Treatment and Prevention of Reproductive Diseases in Animals*. Saunders, Philadelphia. pp: 969-1004.

Wittek, T., Erices, J and Elze, K. (1998). Histology of the endometrium, clinical-chemical parameters of the uterine fluid and blood plasma concentrations of progesterone estradiol 17β and prolactin during hydrometra in goats. *Small Rum. Res.*, **30**:105-112.