

## ULTRASONOGRAPHIC DIAGNOSIS AND MANAGEMENT OF HYDROMETRA IN GOATS

P. SRIDEVI \*, K. KULASEKAR, T.G. DEVANATHAN AND S. RANGASAMY

Department of Animal Reproduction, Gynaecology and Obstetrics,  
Madras Veterinary College, Chennai - 600 007

Received : 14.09.2010

Accepted : 02.05.2011

### ABSTRACT

Ultrasonography, a reliable diagnostic tool for pseudopregnancy in goats

**KEY WORDS:** Hydrometra, Mucometra, Pseudo pregnancy, Ultrasound, Prostaglandins, Goats

### INTRODUCTION

Pseudo pregnancy, hydrometra or mucometra in goats is a pathological condition of the uterus characterized by variable accumulation of fluid within the uterus, persistent corpus luteum and anestrus (Pieterse and Taverne, 1986). It has become feasible to diagnose false pregnancy with real time ultrasound from a true pregnancy thereby facilitating early treatment. This paper reports the use of ultrasonography as an important tool to detect early uterine pathology in goats.

### CASE HISTORY AND OBSERVATIONS

Among the 103 goats subjected to ultrasonography to diagnose pregnancy during a period of 14 months, 54 were diagnosed pregnant, 41 as non-pregnant and 8 with hydrometra. All the eight goats diagnosed with hydrometra had been presented to the large animal gynaecology ward for pregnancy diagnosis with the history of having been bred 3-5 months back. Clinical examination revealed moderate abdominal distension, mammary gland enlargement and engorgement of teats in all cases while one goat was found lactating. Bloody vaginal discharge was noticed in one while two others were voiding watery fluid. Since abdominal palpations to assess pregnancy status were inconclusive, ultrasound examinations were performed with the animal in dorsal recumbency using a 5.0 MHz transducer. Large fluid filled compartments were visualized with thin tissue walls separating the compartments within the uterus. Ultrasonography revealed hypoechoic or snow storm like appearance indicating that the fluid was slightly turbid in nature (Fig.). The absence of fetus and 'C'

shaped caruncles suggested that the goats were non-pregnant and the condition was diagnosed as pseudopregnancy or cloud burst.

### TREATMENT AND DISCUSSION

Goats were treated with 0.25 mg PGF<sub>2α</sub> analogue cloprostenol (Pragma, Intas Pharmaceuticals) with the prime aim of regressing the corpus luteum and evacuating the contents. Discharge of uterine fluid and return to estrus was observed in seven goats. Ultrasound examination of one goat that failed to return to estrus showed persistence of small quantities of uterine fluid which later reduced following second dose of cloprostenol 12 days later.

Pseudo pregnancy has been reported in goats and may occur post mating, characterized by conception followed by early embryonic death with persistent corpus luteum, or post estrus without breeding (Moraes *et al.*, 2007). There could be spontaneous evacuation of accumulated fluid called "Cloud burst" at the expected time of parturition in animals which have developed hydrometra post breeding (Pieterse and Taverne, 1986). Some does show no external signs of hydrometra other than a period of anestrus at the end of which a bloody discharge may be seen (Smith, 1986). Prolactin probably plays an important role in its pathogenesis (Traverne *et al.*, 1995) and may be the cause for the mammary development associated with the condition (Smith, 2001).

It could be concluded that transabdominal ultrasonography can be a useful diagnostic tool for early diagnosis of pseudopregnancy or cloudburst.

Corresponding Author: Associate Professor, Department of Animal Reproduction, Gynaecology and Obstetrics, Madras Veterinary College, Chennai-600 009. E.Mail: drpsridevi84@yahoo.co.in

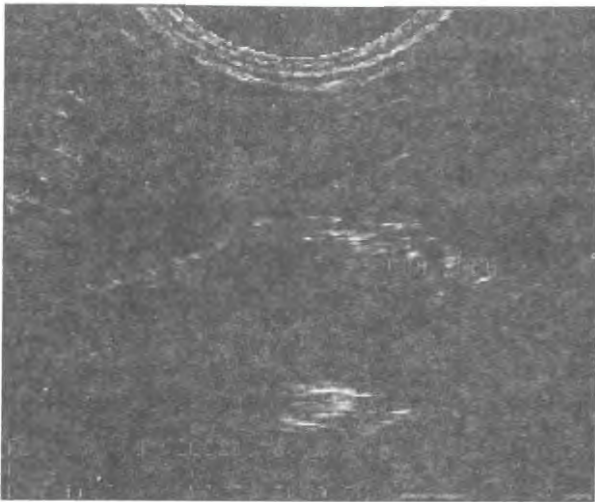


Fig. Fluid accumulation in the uterus forming hyperechoic trabeculae. Uterine collection exhibiting an anechoic image diagnosed as hydrometra.

**REFERENCES**

Moraes, E.P.B.X., Santos, M.H.B., Arruda, I.J., Bezerra, F.Q.G., Aguiar Fitho, C.R., Neres, J.P., Lima, P.F. and Oliveira,

M.A.L. (2007). Hydrometra and mucometra in goats diagnosed by ultrasound and treated with PGF<sub>2α</sub>. *Medicinal Veterinaria*, 1(1) : 33-39.

Pieterse, M.C and Taverne, M.A.M (1986). Hydrometra in goats: diagnosis with real time ultrasound and treatment with prostaglandin and oxytocin. *Theriogenology*, 26: 813-821.

Smith, M.C (1986). Caprine reproduction. In current therapy in *Theriogenology*. Dand.A.Morroco (Ed.), WB Saunders Company, Philadelphia, PP. 576-629.

Smith, K. C (2001). Infertility in the doe and doe (Female goat). In Arthur's Vet. Reproduction and Obstetrics. D.E. Noakes, J.J. Parkinson and G.C.W. England (Ed), 8th Edition, WB Saunders Company, Philadelphia, PP 570-571.

Taverne, M.A.M., Hesselink, J.W., Bevers, M.M., Van Oord, H.A. and Kornaliynslippr, J.E (1995). Aetiology and endocrinology of pseudo pregnancy in the goat. *Reprod. in dom. anim.* 30: 228-230.

Taverne, M.A.M., Lavoit, M.C., Bevers, M.M., Pieterse, M.C and Dieleman, S.J. (1988). Peripheral plasma prolactin and progesterone levels in pseudopregnant goats during bromocriptine treatment. *Theriogenology*, 30: 777-783.

**ISSAR AWARDS**

**S. N. LUKTUKE AWARD**

- ☞ The award is for a young scientist below 35 years who has been on regular teaching / research position and for the best extempore presentation during the Annual Convention and Symposium of ISSAR.
- ☞ The participants should register his or her name with the General Secretary, ISSAR on the first day of convention. Document to prove the age and lifemembership certificate should be presented at the time of registration.
- ☞ Each participants will be given 10 minutes for preparation and 10 minutes for presentation on the given topic. No audio visual aids are allowed except the board and chalk.
- ☞ The award carries a silver medal and a certificate