

EFFICACY OF CLOPROSTENOL THERAPY IN HYDROMETRA GOATS

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ABSTRACT

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Hydrometra is one of the causes of infertility in goats and this condition is known as pseudopregnancy in goats. Pseudopregnancy is also observed in bitches, sow and mare. But in these animals hydrometra is not observed in pseudopregnancy. A total of 20 hydrometra cases were diagnosed, which showed hypoechoic fluid in the uterus on ultra sound scanning. All the cases were treated with injection Cloprostenol at the dose of 250 µg each IM, twice at 11-12 days interval. Draining of uterine fluids was observed 2-5 days after first dose of Cloprostenol injection. 18/20 goats exhibited estrus within 2-5 days after 2nd injection of Cloprostenol and out of the 18 estrus goats 14 become pregnant after breeding.

Key words: Hydrometra, Pseudopregnancy, Cloprostenol, Anestrous

Pseudopregnancy, hydrometra, and mucometra are the terms used to describe a common occurrence in goats characterized by persistent CL, anestrous and a variable accumulation of fluid within the uterus. Generally incidence of pseudopregnancy was less than 3%, but some farms experienced more than 5% (Smith and Sherman 1994). This condition may follow a normal breeding or occur without breeding. The accumulation of fluid is often sufficient to result in abdominal enlargement and the persistent CL causes elevated progesterone concentrations that may remain high for up to 5 months, mimicking normal pregnancy. The spontaneous evacuation of the accumulated fluid is called "cloud burst" by owners. Some of these does may search for a non-existent kid and will start lactation. Some does show no external signs of hydrometra other than a period of anestrous. At the end of this period, a bloody vaginal discharge may be seen. In mated does, this is taken as evidence of abortion. Affected does may show a repetitive pattern of hydrometra or may experience it only once. There

is no evidence of an association between hydrometra and cystic ovaries or an obstructed cervix.

Jamunapari and local Osmanabadi goat presented to the Teaching Veterinary Clinical Complex, College of Veterinary Science, Rajendranagar, Hyderabad for routine screening for pregnancy diagnosis. Some were having the history of breeding more than 3- 4 months back or some presented few months after purchases. During routine pregnancy diagnosis by using ultrasound scanning with the help of trans abdominal probe of 5 MHz frequency, 20 goats were identified as having hydrometra with an enlarged, thin-walled, fluid-filled uterus without evidence of a fetus, placenta, or placentomes (Fig.1). These 20 goats were treated with the administration of injection Cloprostenol 250 µg, IM (Vetmate each ml contains 500µg cloprostenol, Vetcare, Bangalore, 560106, India) on first day of diagnosis and second dose was given again on 11th or 12th day after the first dose. After 2nd dose of Cloprostenol injection does were observed for estrus symptoms by the visual observation by the owner and/or breeding bucks were used for estrus detection. Does exhibited estrus were bred 12 hours after estrus with the fertile breeding

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bucks. Pregnancy diagnosis was done at 50 – 70 days after breeding using Ultrasound scanning.

Slight viscous vaginal discharges were observed in all does 2-5 days after the first injection of Cloprostenol and in some does bloody vaginal discharges were also observed after end of viscous discharge, second injection of Cloprostenol is helpful to prevent the reaccumulation of fluid in the uterus, complete involution of the uterus and also occurrence of the estrus by regressing the corpus luteum. Estrus symptoms were observed in 18/20 goats within 2-5 days after 2nd injection of Cloprostenol. Pregnancy diagnosis was done by using trans abdominal ultrasound scanning 50 to 60 days after breeding, 14 out of 18 goats were found pregnant after breeding by natural service.

The etiology for this hydrometra condition is unknown, in some cases early embryonic death would be the cause. The incidence of Pseudo pregnancy ranged from 0- 20% (Mialot *et al.*, 1991). Pieterse and Taverne (1986) reported recurrence of hydrometra in goats with a single dose of prostaglandin F₂

alpha or oxytocin (50 IU, IM, twice a day for 4 days) after treatment. Hesselink (1993) in Netherlands tried similar treatment by using prostaglandin 5mg double dose at 12 days interval which prevented the reaccumulation of fluid and improved the reproductive performance of goats having pseudo pregnancy and hydrometra condition. Reddy *et al.* (2011) recorded good response with two injections of cloprostenol in hydrometra goats. More (2002) observed persistent corpus luteum on one ovary, closed cervix on postmortem examination and thin bands of reticular fibers with total atrophy of endometrial glands and smooth muscles on histopathological examination of bilateral hydrometra goat.

To reduce the infertility problem due to hydrometra condition, all does should be examined by ultrasonography 35 to 45 days after breeding and again at 60 to 70 days to confirm pregnancy and then again when they are dried off. Does that develop hydrometra should be treated with prostaglandin as soon as the condition is detected, rechecked in 10 to 14 days, and re-treated if fluid is still present in the uterus.

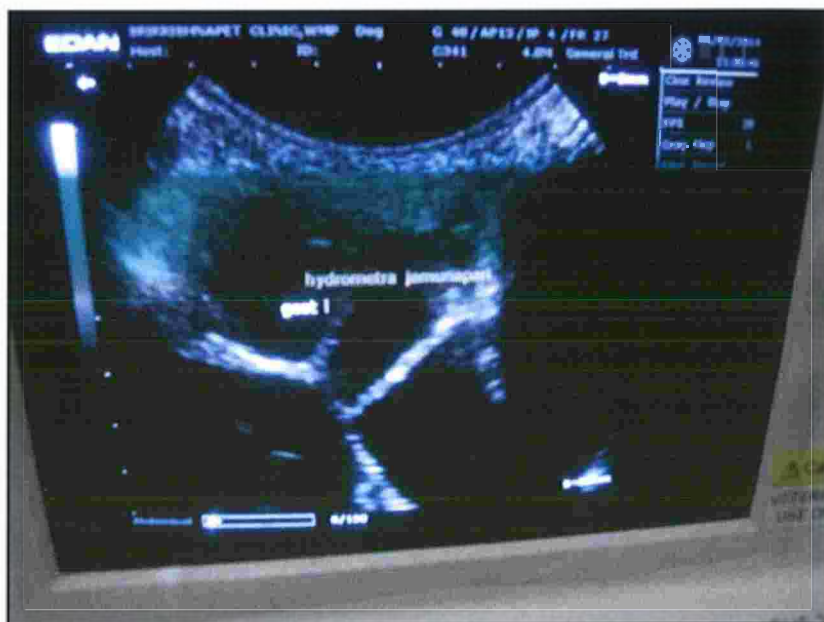


Fig.1. Showing the B-Mode ultrasonographic image. The anechoic fluid – filled uterus void of placentomes. The echodense lines in the uterine lumen of the image represent the folded uterine wall.

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