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Reduction and reposition of uterine prolapse by using *Mimosa pudica* leaves paste in non-descriptive goat

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Abstract

A three years old non-descriptive goat was presented to Teaching Veterinary Clinical Complex, Veterinary College, Shivamogga with the history of postpartum uterine prolapse. The everted mass was assessed and cleaned with potassium permanganate solution. Stabilized the animal with Dextrose normal saline 150ml. Anaesthetized lower epidurally with 2% lignocaine hydrochloride injection and locally applied 2% lignocaine hydrochloride gel on prolapsed mass. Reduced prolapsed mass using *mimosa pudica* 200gm paste and repositioned using glycerin lubrication. The vulval lips sutured by modified Buhner's technique using 1.5 inch width roller gauze dipped in 7% povidone iodine solution and animal recovered uneventfully after postoperative care for 15 days.

Keywords: Uterine prolapse, *Mimosa pudica* and non-descriptive goat

Introduction

In the livestock sector, reproductive disorders are considered to be one of major threat and responsible for reduced productivity and profitability for national and socio-economic development. Common animal reproductive disorders are uterine infections, anestrus, cervicitis, repeat breeding, vaginal prolapse, dystocia and retention of placenta. A wide range of herbal remedies are advocated in folklore medicine for female reproductive disorders including hormonal imbalances, addressing endometriosis and other fertility disorders. This has raised a hope among scientists about the use of indigenous products for the scientific management of the reproductive disorders [3, 6, 7].

Mimosa pudica is a herb used as an anti-fertility agent in Indian folklore medicine. Its use has been advocated against urinary complaints, hypertension, pain relief and menorrhagia. In the traditional system of medicine, *mimosa pudica* root has been employed to treat numerous disease conditions like jaundice, dysentery, vaginal and uterine complaints, inflammation of various tissues, fatigue, asthma, leucoderma etc. literature also cites the use of *mimosa pudica* as an antispasmodic, muscle relaxant, anti-inflammatory, mild diuretic and promoter of nerve regeneration [1]. The juice of mimosa roots has been applied to external fistulas and poultice of leaves is used in case of glandular swelling. The whole mimosa plant is beneficial for vesicle calculi and odema, rheumatism, myalgia and uterine tumors [10].

Post-partum uterine prolapsed occurs in all large animal species. It is most common in the cow and ewe, less common in the goat and rare in the mare. It is simply an eversion of the uterus which turns inside out as it passes through the vagina. Within few minutes to a few hours of delivery of new born the postpartum uterine prolapse may occur which uterus is everted out [2]. The etiology of uterine prolapse is unknown, but many factors have been associated. Endocrine imbalance, poor nutrition, poor reproductive health, closed confinement, dystocia and retained placenta are some associated factors for post-parturient uterine prolapse [4, 9]. Hence, the present case deals with management of total uterine prolapse by using *mimosa pudica* leaves paste soon after parturition in a Non-descriptive goat.

Materials and Methods

Study involved a non-descriptive doe aged 3 years of third parity with a history of kidding of twins 18 hours before was presented to the Teaching Veterinary Clinical Complex, Shivamogga with clinical signs of completely inflamed soiled prolapsed mass with normal vitality signs (Fig 1).



Fig 1: A Non-descriptive goat showing prolapsed uterine mass with maternal caruncle



Fig 2: This picture showing *Mimosa pudica* leaves with flower



Fig 3: *Mimosa pudica* was applied over the uterine prolapse

On Gynaeco-clinical examination revealed that a chronic case with severe inflammation and unable to reduce as it is. The goat was apparently healthy and in standing position. Prolapsed mass was hanging out of vulva above the level of the hock joint. Rectal temperature was recorded as 103.2° F and other physiological parameters were within normal limits. Methodology purely involves reduction of prolapsed mass using *Mimosa pudica* leaves extract. Plant leaves were collected directly from its natural habitat, weighed approximately of 200gm and grinded by adding small amount of water to get paste like consistency which was used for the present treatment.

After reduction of prolapsed mass vulval lips were sutured by modified Buhner's suturing technique. Here we used Buhner's needle and 1.5 inch width roller gauze dipped in 7% povidone iodine solution.

Treatment and Discussions

The lower epidural anesthesia was given using 0.5ml of 2 % lignocaine hydrochloride between last sacrum and first coccygeal vertebrae to prevent straining during replacement of the prolapsed organ Noakes *et al.* [4]. Stabilized with 150 ml dextrose normal saline. Finally after stabilizing the animal soiled uterine mass washed using potassium permanganate solution lubricated using glycerin. Prolapse of the uterus normally occur during the third stage of labour at a time when the fetus has been expelled and the fetal cotyledons has separated from the maternal caruncles Noakes *et al.* [4].

Herb *Mimosa pudica* (Fig 2) (lajjalu in Sanskrit) plant leaves paste of about 200 gm was applied all over the prolapsed mass and left for 20-30 minutes duration results in reduction of mass to its half of its size (Fig 3). In the present case *Mimosa pudica* leaves paste had been used as a tocolytic agent in goat. However, Rathore *et al.* [8] had mentioned *Mimosa pudica* seeds extracts produced concentration-dependent inhibitory effect on myometrium and it seemed to be mediated through inhibitory beta receptor in buffaloes.

Animal hind quarters held elevated on a inclined surface which ease in reposition (Fig 4). With the help of fingers from both hands, prolapsed mass was reposition successfully. Two 5gm Sulfamethoxazole+Trimethoprim; urea intra-uterine bolus was administered. Further, sutured the vulval lips by modified Buhner's suturing technique (Fig 5). It is an advanced technique in which both the sutures from left and right vulval lips tied separately over dorsally and ventrally which will be easy for post-operative care by adjusting the knots both dorsally and ventrally when suture area get inflamed. However Prakash *et al.* [5] mentioned Buhner's suturing technique where the vulval retention suturing done by using only one suture and tied ventral to vulval lips.



Fig 4: Reposition of uterine prolapse was done in inclined surface.



Fig 5: Vulval lips sutured by Modified Buhner's suturing technique.

Oxytocin 20IU was administered intra muscularly. Post operatively given Enrofloxacin 100 mg intra muscularly with non-steroidal anti-inflammatory drug Tolfenamic acid 80 mg intra muscularly for 5 days after replacement of the prolapsed will prevent secondary bacterial infection.

Suture removed after 15 days and ensured complete involution of uterus with uneventful recovery. Total occurrence of uterine eversion in goat has previously been reported by Singh *et al.* [11] and Velladurai *et al.* [12]. Total uterine prolapse usually follows difficulty parturition which needs an immediate correction and treatment. A delayed case always leads to life threatening shock and uterine necrosis, which may eventually lead to uterine gangrene and may complicate the case.

Conclusion

Mimosa pudica was found to be very useful in the case of uterine prolapse with bleeding, consistent with experience of working with the condition. As a first single case by the author this was accepted because of its wide availability and no cost. Today's high prevalence of uterine prolapse and the nature of conventional treatments, mean that the possibility of wide scale adaption of *Mimosa pudica* (Lajjalu) treatment for that and related problem merits further evaluation.

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