Case Report

Clinical Management of Uterine Prolapse in Non-raising Hindquarter Condition of Cross Breed Dairy Cow

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Abstract | Uterine prolapse is most common and important reproductive disease of dairy cattle. A crossbreed cow of 3rd lactation came to Madras veterinary college with the clinical sign of complete uterine prolapse which calved one day before. The cow was handled and the prolapsed mass was corrected so carefully that there could be saved the life without any complication. The prolapsed mass of cow was managed with lukewarm water and manual pressure replacement in non-raising condition of hindquarter. Vulvar Retention Suture (modified Bhuners suture) was given for not to recurrence of the condition. Proper postoperative treatment with antibiotic, antihistaminic and hormonal drugs were given. This case as well as the condition of the animal were followed up and gave the result of successful recovery without any complication.

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Introduction

Uterine prolapse is the eversion of uterus from its normal position in pelvis further hanging from vulva. It is most commonly seen in pluriparous dairy cows and most common in cow and ewe (Joseph et al., 2001). Immediately after prolapse, tissue appears almost normal, but within a few hours they become enlarged and edematous. It has been estimated that 0.3% to 0.5% of all calving's terminate in a prolapse of uterus (Bhoi et al., 2009). It is most common in the third stage of labour in cow and it has been noticed mainly in dairy cattle which has many predisposing factors- nutrition, hypocalcaemia, prolonged gestation, poor uterine tone, severe straining, prolonged dystocia, fetal traction, fetal oversize, retained fetal membrane, chronic diseases of reproductive tract (Alam et al., 2014). Animals with uterine prolapsed treated promptly recovers without complication while delay treatment could result in death of animal in a matter of hour or so from internal hemorrhage caused by weight of organ which tears mesovarium and artery (Noakes et al., 2001). To relieve the cow from this condition, immediate reduction is required either in raising (White et al., 2007) or non-raising hindquarter condition by applying proper suture (Hiranya et al., 2012). It is true that success of case depends on type of case, duration of case, age of animal, health status of animal and degree of contamination (Senthil et al., 2015). In dairy cattle, prolapse of uterus is usually associated

Figure 1: *Clinical management of uterine prolapse (A. Prolapsed uterus, B. Uterus placing in normal position after epidural anesthesia, C. Per-vaginal checking of uterus, D. Vulvar retention suture)*

with hypocalcemia or milk fever. If prompt treatment is instituted, a post-operative fertility rate of 40-60% has been recorded (Tyagi et al., 2006). The objective of the present study was to manage and correct the case of uterine prolapse to save the crossbreed high yielding cow.

Materials and Methods

A third parity cross bred dairy cow was presented on 8:15 AM at Large Animal Obstetrics Unit of Madras Veterinary College with a gross lesion of total prolapsed uterus. A normal male calf was born before eight hours. Anamnesis revealed that, normal rectal temperature was 103^0F and pulse and respiration rate were elevated. Maternal caruncle was found on the prolapsed uterus. Prolapsed mass was hanging down almost to its hock joint at standing condition.

Caudal epidural anaesthesia (between the 1st and 2nd coccygeal vertebra) was performed by 2% Lignocaine Hydrochloride at @15 ml as induction dose and @25 ml as maintenance dose. The cow was restrained and positioned at standing condition. In addition, fluid therapy (ringers lactated saline, dextrose saline and normal saline) were given at @25 ml per kg body weight. Placenta of the animals was removed gently with Figure 1 tips and total prolapsed mass was washed with diluted antiseptic solution. The prolapsed uterus was elevated at the level of ischium for easier reduction and relief vascular compromise. It was difficult to position uterus at first because it was filled with uterine fluid. So, an incision in the uterus was made to evacuate the fluid as per as possible. A large amount of blood tinged fluid was evacuated at that time. Approximately after 2 hours, uterus was replaced to its normal position. A temporary closure of the vulva was performed by the Vulvar Retention suture (modified Burried Brhners suture) for better protection and suture was be removed after 7-10 days. Cow was recovered quickly with following post-operative treatment - hormonal (Oxytocin, 5cc; Prosta-

glandin 5cc) through i/m route, antibiotic (Metronidazole, 100cc, intrauterine wash; Enrofloxacin, 20cc daily, i/m route), Antihistaminic (10cc, daily) through i/m route and fluid therapy (Calcium, 350cc, daily; normal saline, 5000cc daily) through i/v route.

Result and Discussion

Uterine prolapse can be replaced with the animal in standing or recumbent position (Hanie, 2006). In the presented case, the condition was corrected successfully in non-raising hind quarter with successful recovery which is commonly practiced in raising hindquarter condition in cattle. This finding was similar with the findings of (White, 2007). During surgery less amount of bleeding was noticed. The modified Bhuners suture technique, using infusion set tubing as suture material, was found to be very satisfactory in preventing recurrence of the prolapse (White, 2007) was similar with finding of this study. The main goal in the treatment of uterine prolapse is to replace the organ followed by a method to keep it in the retained position (Senthil et al., 2015) and to assure the prognosis good or favorable.

Prolapse of the uterus normally occur during the third stage of labour at the time when fetus is expelled and the fetal cotyledon has separated from the maternal caruncles (Noakes et al., 2005) similar with presented study. It is generally best to replace portions of the upper and lower surface alternatively. In recumbent animal, the immediate need is to cover the prolapsed mass with clean, wet cloth to keep the mass moist and free from further animal. In standing animal, the mass is wrapped in a cloth and hold high level of the vulva. Handling of the prolapsed organ invariably leads to a bout of tenesmus and therefore light epidural anesthesia is mandatory (Tyagi et al., 2006). Most animals with uterine prolapse are hypocalcaemic (Fubini and Ducharme, 2006).Where signs of hypocalcaemia are noticed such animals should be given calcium borogluconate (Arthur et al., 2004). Here, the animal was also treated with a preliminary injection of calcium borogluconate. Oxytocin 10 IU intramuscularly was administered for involution of uterus. Beside these, large amount of water was inserted to the uterus to give it normal position by gravitational force. After complete replacement of the uterus, the water brought out from the uterus. An injectable broad spectrum antibiotic was also used for 3-5 days after replacement of prolapsed uterus to prevent secondary bacterial infection (Borobia-Belsue, 2006; Plunkett, 2000). Here, no infection was found after management of uterine prolapse. Uterine prolapse may progress into fatal septicemia in delayed case (Hiranya et al., 2007). The most probable complications of uterine prolapse are hemorrhage, infertility, shock, septic metritis, peritonitis or finally death (Noakes et al., 2001). However, complications develop when laceration, necrosis and infections are present or when treatment is delayed. But in the presented case there was no such complication and showed successful recovery. Minimum bleeding was observed during management. Superficial debris was removed by using water carefully and also vigorous attempts to remove superficial contamination should be avoided.

Conclusion

Generally, uterine prolapse is corrected by raising hindquarter condition of the animal. But in this case, it was also observed that uterine prolapse was corrected in non-raising condition of hindquarter with successful recovery. So, this method can be practiced in any field condition for good result or prognosis with less difficulty of raising.

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Conflict of Interest

There is no conflict of interest in this study.

Authors Contributions

Tuli Dey, Case handling, Synopsis preparation and writing of manuscript. Sonnet Poddar, Formatting of manuscript.Mukti Barua,Supervising during this study.

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