

## Management of Post-partum Uterine Prolapse in a Buffalo

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### Abstract

A buffalo in her second parity was brought with history of uterine prolapse following normal delivery of a female calf twelve hours earlier and expulsion of fetal membrane two hours earlier. The prolapsed uterus was injured, swollen, edematous and contaminated with dung and wheat straw. The prolapsed mass had exposed cotyledons, numerous bleeding points and had laceration. The vaginal wall was tense, edematous, swollen, thicker and bluish pink in appearance. The epidural anesthesia was achieved by infiltration 2 percent Xylocaine into sacro-coccygeal space. The prolapsed mass was lubricated with Xylocaine gel and replaced into normal position by gentle pressure. The body was first pushed followed by horns. To prevent the reoccurrence of prolapse a rope truss was applied around the vulvar lips. The animal was treated with injection Calcium magnesium borogluconate, 5 percent Dextrose normal saline (DNS) and Oxytocin. Ceftiofur sodium plus Tazobactam, Meloxicam, Chlorpheniramine maleate and vitamin B<sub>1</sub>, B<sub>6</sub> and B<sub>12</sub>. The rope truss was removed after third day of therapy. The animal showed complete recovery after five days of therapy and no reoccurrence of prolapse was reported by owners.

**Keywords:** Buffalo; post-partum; uterine prolapse

### Introduction

Uterine prolapse is one of the serious life-threatening complications that occur during the period immediately following parturition. Post-partum uterine prolapse occurs in all large animal species. It is most common in cows and ewes, less common in does and rare in mares. It is an eversion of uterus which turns inside out as it passes through the vagina. Prolapse of uterus generally occurs immediately after or few hours of parturition when the cervix is open and uterus lacks tone (Hanie, 2006). Prolapse that occurs more than 24 hours post-partum is extremely rare and is complicated by partial closure of cervix making replacement difficult or even impossible (Fubini and Ducharme, 2006). Various predisposing factors have been suggested for uterine prolapse in cow *i.e.* hypocalcemia, prolonged dystocia, fetal traction, fetal oversize, retained fetal membrane, chronic disease and paresis (Potter, 2008). Deficiencies of serum calcium, magnesium and phosphorous during gestation and pre-partum period have been found to be significant association with occurrence of uterine prolapse in buffaloes

(Abbas and Fahad, 2016). For buffaloes, hypocalcemia (Khamees *et al.*, 2014) and pelvic or rump measurement have been reported as significant risk for occurrence of uterine prolapse, subsequent to prolapse the tissue appear almost normal but within few hours they become enlarged and edematous. Some animals will develop hypovolemic shock secondary to internal blood loss, laceration of prolapsed organ or incarceration of abdominal viscera (Ahmad *et al.*, 2005).

Myometrial contraction is usually high at parturition and during the immediate post-partum period and those probably maintain the uterus in normal position with sequential size reduction in next few days. The peak value of peripheral plasma concentration of prostaglandin metabolism occurs on day of calving in buffaloes which then drop by day 1-3 after delivery (Madan *et al.*, 1984). Thus, poor myometrial contraction appears to be a logical reason for uterine prolapse in buffaloes (Khamees *et al.*, 2014). The present paper records a case of post-partum uterine prolapse in buffalo and its successful management.

### History and Clinical Observations

A six years old buffalo in her second parity was brought with history of uterine prolapse following normal delivery of a female calf 12 hours earlier and expulsion of fetal membrane two hours earlier. The prolapsed mass was injured, edematous and contaminated with mud, dung and wheat straw (Fig.1). Vaginal and uterine wall were tense

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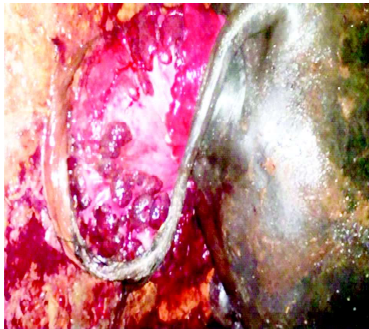


Fig. 1: Post-partum uterine prolapse



Fig. 2: Uterine prolapsed mass with numerous bleeding points and lacerations

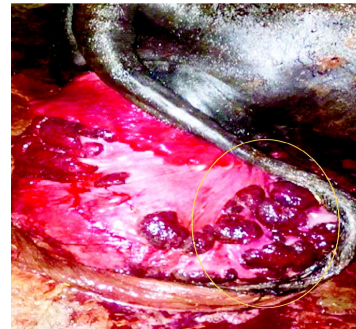


Fig. 3: Uterine prolapsed mass with exposed cotyledons



Fig. 4: Retention of prolapsed mass with rope truss after repositioning

edematous, swollen, thicker and bluish pink in appearance. The uterine prolapse mass had exposed cotyledons (Fig. 3), numerous bleeding points and lacerations (Fig. 2). The animal was dull, depressed and anorectic with normal body temperature. The animal was straining continuously and presented in sternal recumbency.

#### Treatment

The buffalo was sedated by injecting 5 ml of Triflupromazine hydrochloride, intramuscularly followed by restrained in recumbent position by injecting 8 ml of 2 percent Xylocaine epidurally at sacrococcygeal space to prevent straining. The vulva and perineal regions were cleaned thoroughly with the soap solution. The prolapsed mass was washed thoroughly with chilled water containing Potassium permanganate (1: 1000) followed by flushing with metronidazole solution and mass was lifted to the level of ischial arch and urine was removed from the bladder by catheterization. The prolapsed mass was

a - Brand of Elanco India Pvt. Ltd. Mumbai

b - Brand of Intas Animal Health, Ahmedabad

lubricated with Xylocaine gel and replaced into normal position by applying gentle pressure by fist. To prevent the reoccurrence of prolapse a rope truss was applied around the vulvar lips (Fig. 4). The buffalo was administered with injection of Calcium magnesium borogluconate (Mifex<sup>a</sup>), 450 ml, slow intravenous; injection Dextrose normal saline (5 percent), 5 liters, intravenous and injection Oxytocin, 25 IU, intramuscular only on first day. Followed by injection of Ceftiofur sodium plus Tazobactam, (Xyrofur Tazo<sup>b</sup>) at 2.2 mg/kg b.wt., intramuscular; injection Meloxicam (Melonex<sup>b</sup>) at 0.5 mg/kg b.wt., intramuscular; injection Chlorpheniramine maleate at 10 ml, intramuscular and injection B<sub>1</sub>, B<sub>6</sub>, B<sub>12</sub> (Tribivet<sup>b</sup>) at 10 ml, intramuscular for five days.

#### Results and Discussion

The animal showed signs of recovery on the second day with gradual increase in feed intake, milk production and complete clinical recovery after 5 days of therapy. The rope truss was removed after 3<sup>rd</sup> day of therapy and no reoccurrence of prolapse was reported by owner. Prolapse of the uterus normally occurs during 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.*, 2001). The uterine prolapse can be replaced in a standing or recumbent position (Hanie, 2006). Once the uterus is replaced, the operator's hand should be inserted into the tip of both uterine horns so that the remaining invagination could not initiate abdominal straining and prolapse (Fubini and Ducharme, 2006). If the uterus is completely and fully replaced to the tips of the uterine horns, the prolapse is unlikely to occur (Hanie, 2006). Once the uterus is in normal position, Oxytocin 25 IU intramuscularly should be administered to increase uterine tone. Hypocalcemia is thought to predispose

prolapse of genital organs causing atonicity of genitalia was treated with administration of parenteral Calcium magnesium borogluconate. Meloxicam injection was given for rapid reduction of inflammation, pain and pyrexia.

Retention of the prolapsed mass is most important to prevent trauma to the prolapsed mass. Epidural anesthesia was given to check straining and easy repositioning of prolapsed mass and to relieve tenesmus with short-acting Lignocaine hydrochloride to desensitize sensory, motor and autonomic nerve (Ahmed *et al.*, 2005). Lower Phosphorous and higher Magnesium concentration (Akhter *et al.*, 2008) were observed in buffalo suffering from vaginal prolapse. Atonicity of genitalia caused by hypocalcemia was treated with parenteral Calcium. An injectable broad-spectrum antibiotic was administered for 5 days after replacement of prolapsed mass to prevent secondary bacterial infection (Borobia Besue, 2006). So, broad-spectrum antibiotic Ceftiofur sodium plus Tazobactam was given to minimize infection which might be present due to exposure of structure to the environment. Ceftiofur sodium plus Tazobactam has remarkable activity against wide range of aerobic and anaerobic, Gram-positive and Gram-negative bacteria including beta-lactamase producing strains. The post-partum uterine environment is anaerobic in nature (Ball *et al.*, 1984). Lignocaine gel was applied on prolapsed mass for lubrication as well as anesthetizing the prolapsed mass (Singh *et al.*, 2011). Triflupromazine hydrochloride was used as sedative and found easier for restraining and bringing to calm and quiet condition of the animal. The present treatment was almost similar and showed close resemblance to treatment reported by Singh *et al.* (2017) for management of post-partum cervico-vaginal prolapse in buffalo.

In the present study, it was concluded that reduction, reposition and retention of prolapsed mass followed by administration of Calcium magnesium borogluconate, Oxytocin, 5 percent Dextrose normal saline (DNS), Ceftiofur sodium plus Tazobactam, antihistaminics, anti-inflammatory and multivitamins successfully managed uterine prolapse in a buffalo.

## References

- Abbas, M.F. and Fahad, T.A. (2016). Effect of deficiency of some minerals (calcium, non-organic phosphorous and magnesium) on occurrence of uterine prolapse in local buffalo breed in Basra Province. *Basrah J. Vet. Res.* **15**: 27-33.
- Ahmed, S., Ahmad, I., Lodhi, L.A., Ahmad, N. and Sand, H.A. (2005). Clinical, hematological and serum macro-mineral contents in buffaloes with genital prolapse. *Pak Vet. J.* **25**: 167-70.
- Akhtar, M.S., Lodhi, L.A., Ahmad, I., Qureshi, Z.I. and Muhammad, G. (2008). Serum concentration of calcium, phosphorous and magnesium in pregnant Nili-Ravi buffaloes with (or) without vaginal prolapse in irrigated and rain fed areas of Punjab. *Pak. Vet. J.* **28**: 107-10.
- Ball, L., Olson, J.D. and Mortimer, R.G. (1988). Therapeutic consideration for the post-partum bovine uterus. *Soc. Theriogenol. Newslett.* **7**: 4-5.
- Borobia-Besue, J. (2006). Replacement of rectal prolapse in sows. *Vet. Rec.* **158**: 380.
- Fubini, S.L. and Ducharme, G.N. (2006). *Textbook of Farm Animal Surgery*, p. 333-38.
- Hanie, F.A. (2006). *Text Book of Large Animal Clinical Procedures for Veterinary Technicians*. Elsevier Mosby, p. 218-21.
- Khamees, H.A., Altars, A.A. and Fahad, T.A. (2014). The relationship between post-partum uterine prolapse incidence and some micromineral serum level deficiency in buffalo cows in Basarah Province. *Al-Quadisiyeh J. Vet. Med. Sci.* **13**: 94-97.
- Madan, M.L., Singh, M., Prakash, B.S., Naqvi, S.M.K. and Roy, A.K. (1984). Post-partum endocrinology of the buffalo. *Proceeding of 10<sup>th</sup> International Congress Animal Reproduction and Artificial Insemination*, Vol. III; 1984, June-10-14; USA, Urbaha, USA: Publisher University of Illinois, Urbaha-Champargh, p. 402.
- Noakes, D.E., Parkinson, T.J. and England, G.C.W. (2001). *Arthur's Veterinary Reproduction and Obstetrics*. Saunders, p. 333-38.
- Potter, T. (2008). Prolapse of uterus in the cows. *UK Vet. J.* **13**: 1-3.
- Singh, B., Singh, K.P., Singh, S.V., Singh, J.P. and Singh, H.N. (2011). Post-partum cervico-vaginal prolapse in buffalo. *Intas Polivet* **12**: 32-33.
- Singh, K.P., Singh, B., Singh, P., Singh, R.V. and Singh, J.P. (2017). Management of post-partum cervico-vaginal prolapse in a buffalo - A case report. *Indian J. Anim. Hlth.* **56**: 303-06.

Received on: 15.05.2021  
Accepted on: 18.08.2021