

## Short Communication

# SUCCESSFUL MANAGEMENT OF A RARE CASE OF UTERINE PROLAPSE IN A MARE

Pravesh Kumar<sup>1\*</sup>, Sadiya Basir<sup>3</sup>, Madhumeet Singh<sup>2</sup>, Akshay Sharma<sup>4</sup>, Anushma<sup>3</sup>

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**ABSTRACT:** A six year old mare in second parity was presented in a clinical camp at Gasota village of district Hamirpur, Himachal Pradesh with a history of uterine prolapse 3 hours after foaling and 30 minutes after placental expulsion. Following epidural anesthesia, the uterus was replaced to its normal position. A rope truss was applied for further retention of prolapsed mass. A 10 days later examination of uterus through per-rectum revealed the normal uterine involution. Proper medication and management of the presented case prevented the relapse of the condition.

**Key words:** Mare, Rope truss, Uterine prolapse.

Uterine prolapse is a condition wherein uterus turns inside out and protrudes out of the vagina, diagnosed on visual examination by the presence of prolapsed uterus hanging from the vagina as a soft mass with red, corrugated surface (Farjanikish *et al.* 2016). The everted endometrium is rich in terms of vascularisation and can be easily recognized (Allen 1989). Uterine prolapse has been documented in all animal species after parturition, but it is an uncommon complication of foaling (Cetin and Gurgoze 2004, Causey *et al.* 2007). Mare's uterus is suspended cranially and laterally by the broad ligaments, which (cranial attachment) makes prolapse less likely to occur in mare than in the cow (Zent 1987). During uterine prolapse if mare remains in standing position, the whole hanging uterus can put pressure on uterine ligament which may cause irritation and severe symptoms of the colic (Cetin and Gurgoze 2004). The etiological origin of the condition has been proposed as postpartum uterine contractions due to uterine involutions, which are strong enough in mare (Ocal 1999).

Strong tenesmus combined with uterine atony may predispose the mare to uterine prolapse (Shuwarger and Young 1985). Young primi-parous as well as in old pluri-parous mares are equally susceptible to uterine prolapse. It might be predisposed by long mesometrial attachments, a relaxed or flaccid uterus or retention of the placenta at

the ovarian pole in the non-gravid horn (Roberts 1986, Blanchard *et al.* 1998). An increase in intra-abdominal pressure due to cribbing, straining or tenesmus or colic and difficult foaling can cause outset of the condition (Roberts 1986).

### History and clinical observations

A non-descript mare aged about 6 years in second parity was presented with prolapsed uterus 3 hours after foaling. Foaling was normal with gestation length of 340 days. Animal was alert with poor body condition score and normal feeding, urination and defecation. The uterus prolapsed 30 minutes after expulsion of placenta. Owner had observed vigorous straining during and after placental expulsion. The signs of intermittent colic were observed by the owner approximately one hour after prolapse.

The animal was standing, and the clinical examination revealed that even though the overall condition was good, the pulse and respiration rate were slightly above the average value (pulse 62 per minute and respiration 31 per minute) and rectal temperature was slightly low (100°F). Mild to moderate symptoms of restlessness, pain and anxiety were observed. Examination of the uterus revealed that the body of the uterus was hanging out up to hock. The uterus was hanging out by about 62 cm outside the vulva with a diameter of 34 cm (Fig.1).

<sup>1</sup>Assistant Professor, <sup>2</sup>Professor and Head, <sup>3</sup>PG Scholar, <sup>4</sup>PHD Scholar, Department of Veterinary Gynaecology and Obstetrics, DGCN College of Veterinary and Animal Sciences, CSK Himachal Pradesh Krishi Vishvavidyalaya, Palampur- 176062, India.

\*Corresponding author. e- email: pk9919@gmail.com

Uterine endometrium was congested. Uterus was edematous and stained with blood clots.

### Treatment and discussion

Epidural anesthesia (10 ml of 2 % lignocaine) was achieved through 18 gauge needle by inserting in between first and second coccygeal vertebrae, to overcome straining. Tetanus toxoid (5 ml) was injected to prevent any further complications of tetanus. The uterus was placed inside plastic bags to reduce the risk of laceration and was raised above the level of vulvar lips to reduce the edema developed due to passive venous congestion. The prolapsed uterus was cleaned and washed with ice cold sterile saline solution (5 liters) and with povidone iodine solution after dilution in saline solution (1:10) to reduce any gross contaminations and edema. The urine was evacuated with the help of 18 Fr (French) two way Foley's catheter. The uterus was lubricated with lignocaine jelly (2%) and antibiotic ointment framycetin sulphate 1% w/w. The prolapsed uterus was replaced to its normal anatomical position carefully after holding it up by elevating uterine mass to vulvar level with the help of a piece of cloth and straightened to remove any possible horn invagination, once replaced inside pelvis. This whole process was done in sternal recumbency by keeping animal on inclined surface. The hind quarter of the mare

was maintained on upper side of the gradual gradient of the inclined surface so that proper replacement of the prolapsed uterus can be done easily.

The uterus after replacement was filled with sterile saline (5 liters) and drained out to ensure complete cleansing and to prevent uterine horn invagination. To rule out uterine atony as possible cause of prolapse, slow intravenous oxytocin Ringer's lactate solution (10 units/500 ml bottle) was administered postoperatively to stimulate uterine contractions and to hasten involution of uterus. A total dose of 50 units of oxytocin were given by slow intravenous route over a period of 2 hours. Epidural anesthesia with 2 per cent lignocaine was repeated thrice at a gap of 3 hours to prevent the straining. For the purpose of retention, rope truss (Fig. 2) was applied and was kept for a period of 24 hours. Postoperatively, the mare was maintained under cover of antibiotic inj. (Ceftriaxone and Tazobactam 3375mg @ dose rate of 25 mg/kg body weight twice a day), anti-inflammatory inj. (Flunixin meglumine @ 1.1 mg/kg body weight) and inj. Chlorpheniramine maleate 10 ml total dose through intramuscular route for 5 days. Administration of 250 ml intravenous Calcium boro gluconate solution mixed in 5 liters Dextrose Normal Saline was given with regular monitoring of heart beat. Recovery was uneventful after replacement of the prolapsed uterus. In this regard, the



Fig. 1. Uterine prolapsed in mare



Fig. 2. Rope-truss application.

owner was recommended to watch the animal for recurrence of the condition for up to 48 hours. After 10 days animal was examined to check the rate of uterine involution.

The prolapse of uterus in mare has to be handled more carefully than cow as it is more fragile and softer (Chisholm 1981). However, it can be easily replaced than cow uterine prolapse due to absence of cotyledons (Noakes *et al.* 2009). Uterine prolapse occurred mainly due to straining at the time of dystocia and retained placenta but in presented case both the conditions were absent. The staining was only evident immediately after placental expulsion. Moreover, the mare was very weak and might not be able to hold the uterus in normal anatomical position due to secondary uterine inertia developed due to general debilitating condition. Calcium deficiency as an important reason of development of secondary uterine inertia in debilitating animal had been documented by many authors (Roberts 1986, Cetin and Gurgoze 2004, Noakes *et al.* 2009). Uterine prolapse along with fetal membrane has also been reported by Allen (1989) in a similar way where it was seen just after expulsion of fetus and placenta.

Restraining and epidural anesthesia used to manage this case was in agreement with Cetin and Gurgoze (2004). Similarly the oxytocin was used to maintain the tonicity, contractibility and to increase the rate of uterine involution of prolapsed uterus which was further helpful to prevent its recurrence as being tried by various workers at different dose rates (Cetin and Gurgoze 2004, Causey *et al.* 2007, Farjanikish *et al.* 2016). Uterine prolapse should be considered an emergency condition as prognosis is poor in mare than other species (Roberts 1986, Farjanikish *et al.* 2016). Moreover, uterine prolapse in mare could be complicated by endotoxemia or septicemia, fatal intra-abdominal hemorrhage if the enlarged uterine vessels ruptured (Roberts 1986, Blanchard *et al.* 1998). The condition might be further complicated by rupture of internal uterine vessels, shock, or incarceration and ischemia of viscera, leading to death (Roberts 1986, Pascoe and Pascoe 1988, Vivrette 1997). In replaced uterine prolapse cases metritis and laminitis were considered to occur immediately after reposition which could be prevented by proper cleansing of uterus and proper antibiotic therapy (Frazer 2003, Cetin and Gurgoze 2004, Farjanikish *et al.* 2016). The presented mare was examined eight months later through trans-rectal palpation which revealed that uterine shape, size and tone were

normal, and no abnormalities were found. In the next breeding season mare conceived normally and gave the birth to a male foal without any complication.

## REFERENCES

- Allen WA (1989) Fertility and obstetrics in the horse. Blackwell Scientific Publications, London.
- Blanchard TL, Varner DD, Schumacher J (1998) Manual of equine reproduction, 1<sup>st</sup> edn. St. Louis: Mosby-year book.
- Causey R, Ruksznis D, Miles R (2007) Field management of equine uterine prolapse in a through bred mare. *Equine Vet Educ* 19(5): 254-259.
- Cetin H, Gurgoze SY (2004) Uterine prolapse in a purebred Arabian mare: a case report. *Vet Med-Czech* 49(12): 473-475.
- Chisholm FR (1981) Uterine prolapse in a mare. *Can Vet J* 22: 267-268.
- Farjanikish G, Sookhthezari A, Raisi A (2016) Surgical treatment of uterine prolapse in a mare: clinical report. *Iran J Vet Surg* 11(2): 53-56.
- Frazer GS (2003) Postpartum complications in the mare: part 1: conditions affecting the uterus. *Equine Vet Edu* 5: 45-54.
- Noakes DE, Parkinson TJ, England GCW (2009) Veterinary reproduction and obstetrics. 9<sup>th</sup> edn. Bailliere Tindall, London.
- Ocal H (1999) Prolapsus uteri. In: Alacam E (ed.): *Evcil Hayvanlarda Dogum ve Infertilite*. Medisan Yayinevi, Diskapi, Ankara.
- Pascoe JR, Pascoe RR (1988) Displacements, malpositions and miscellaneous injuries of the mare's urogenital tract. *Vet Clin North Am: Equine Pract* 4: 439-450.
- Roberts SJ (1986) Veterinary obstetrics and genital diseases, 3<sup>rd</sup> edn., Woodstock ventures LC, New York.
- Shuwarger D, Young R (1985) Management of neonatal genital prolapse: case reports and historic review. *Obst and Gyne* 66: 61-63.
- Vivrette SL (1997) Parturition and postpartum complications. In Robinson NE: *Current therapy in equine medicine*, Philadelphia, WB Saunders.
- Zent WW (1987) Postpartum complications. In Robinson NE: *Current therapy in equine medicine*. 2, Philadelphia, WB Saunders.

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