



Clinical Report

Surgical Treatment of Uterine Prolapse in a Mare: Clinical Report

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Abstract

Case Description- A 6-year-old mare suffering from uterine prolapsed was presented to the veterinary clinic. The uterus was prolapsed 4 hours following a normal foaling.

Clinical Findings- Initial evaluations of the uterus revealed that prolapsed part of uterus (about 60 centimeters) was congested but its endometrial tissue was seen viable.

Treatment and Outcome- Before treatment, epidural anaesthesia was applied to prevent straining. Then the prolapsed uterine was washed by normal saline and following a distended bladder was drained by a soft rubber stallion catheter. Finally the prolapsed part of uterus was returned to its normal anatomic position by gentle manipulation. To prevent the recurrence of prolapse vulva was sutured by Buhner's method. Administrations of intramuscular oxytocin, systemic antibiotics with flunixin meglumine and calcium gluconate solution were post-operative procedures in 5 days.

Clinical Relevance- Uterine prolapse is not a common condition in the mare. Uterine prolapse in the mare is easy to replace when treated in the early period. If the uterine prolapse is recognized early and treated immediately, prognosis is usually good.

Key words: Uterine prolapse, Mare, Normal foaling, Buhner's Method.

Case Description

A 6-year-old mare was presented to the Veterinary Clinic of Lorestan University with uterine prolapsed. The prolapse was started 4h following a normal foaling and had 10h time left before admission. The owner claimed that the mare had given birth to two normal foals without any uterus complication previously.

Clinical Findings

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, respiration: 31). 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 by about 60 cm outside the vulva and that it had a normal appearance (Fig.1). Uterine endometrium was congested. Uterus was edematous and stained with blood clots. The uterus was placed inside plastic bags to reduce the risk of puncturing or lacerating. The plastic bags are removed as the uterus was pushed inside the vagina.

A distended bladder was drained before attempting to replace the uterus by passing a soft rubber stallion catheter through the urethra.



Fig. 1: The body of the uterus was hanging out by 60 cm outside the vulva and uterine endometrium was congested and edematous

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Received 26 Jan 2016; accepted 12 Aug 2016

Treatment and Outcome

Before treatment, epidural anaesthesia (10 millilitres of lidocaine, 2% - Pasteure of Iran) was administered to subside straining and animal comfort. The uterus prolapsed was massaged and washed with sterile saline solution to reduce edema and any gross contaminations. The uterine prolapsed was lubricated with sterile Vaseline and replacing carefully after holding it up with lubricated gloved hands and pushing it into the mare's pelvis. The prolapsed part of uterus was then returned to its normal anatomic position by gentle manipulation. Once the uterus was replaced, the hand was inserted into uterine horn to remove any possible horn invagination. To prevent the recurrence of prolapse, the uterus was then filled with sterile saline and drained out to ensure complete replacement of uterine horns.

The vulva was sutured using Buhner's Method (Fig.2). Briefly, two one-half cm incisions were made two cm above the upper and lower commissures of the vulva. With a buhner needle, inject set suture was passed within the tissues from one incision to the other lateral to one vulvar lip. The needle was withdrawn and reinserted in the opposite vulvar lip to the lower incision site and again withdrawn. This purse-string suture around the vulva was tightened sufficiently to allow six centimeters in the vulva, and the knot was tied and left in place for five days.

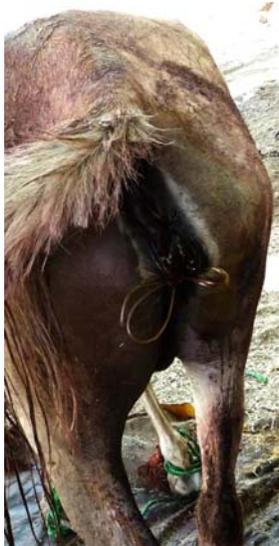


Fig. 2: The vulva suture using Buhner's Method.

Postoperatively, the mare was treated with antibiotics, and anti-inflammatory drugs. Intramuscular oxytocin (20 units IM) was administered postoperatively in order to stimulate uterine contractions, maintain uterine tone and thus to prevent recurrence of the prolapse. To prevent metritis and laminitis gentamicin, 6.5 mg/kg

and procaine penicillin, 45,000 IU/kg in company with flunixin meglumine (0.4 mg/kg, every 12 hours) injected. This medication was repeated daily for the next five days. Intravenous of 300 mL calcium gluconate solution, mixed in 5 L lactated Ringer's solution (LRS), was administrated to improve uterine muscular contractions. Recovery was uneventful after replacement of the prolapsed uterine. No tetanus antitoxin was applied.

The owner was informed of the possibility of a recurrence of the prolapse and of the risks of metritis, adhesions, peritonitis, and a decrease in fertility. In this regard, the owner was also advised to keep the filly alone in a small box stall and to watch for recurrence of the condition for up to 48 hours.

Eight months later, a transrectal palpation revealed that uterine shape, size and tone were normal, and no abnormalities were found.

Clinical Relevance

Uterine prolapse is a disorder in which the uterus turns inside out and protrudes out of the vagina. Diagnosis is based on the presence of the prolapsed uterus hanging from the vagina as a soft mass with a red, corrugated surface. Uterine prolapse has been reported in all animal species, although it is an uncommon complication of equine parturition.^{1,5,8,15,16} Uterine prolapse is a relatively common condition in the postpartum dairy cow, generally associated with hypocalcemia and dystocia.^{10,12,13} This condition is rare in the mare.^{2,3,11,12} Occurring shortly following parturition and it has been reported sporadically as isolated cases.^{6,14}

Sometimes following a very difficult birth, the mare will continue to push after the foal is delivered due to residual pain and irritation. But in this case, prolapsed was occurred after normal delivery. In this report, although there were no signs of dystocia, but straining before foaling may have influenced in occurring of the uterine prolapse.

Uterine prolapse is more likely to occur immediately after parturition but sometimes occurs several days later.^{4,7} Conditions that cause strong tenesmus combined with uterine atony predispose a mare to uterine prolapse.¹⁴ In this case the uterus was prolapsed 4 to 5 h following a normal foaling without definite recognized etiology.

In the case of uterine prolapse in mares, clinicians should have more seriousness because the prognosis of uterine prolapse is usually weaker than the other animals.¹² After careful cleansing and repair of any injuries to the uterus, the uterus must be return to its normal position within the abdomen. Once the uterus is back in place, the hormone oxytocin is given to help contract the uterus and keep it in position. Complications, such as endotoxemia or septicemia, bleeding, and shock, may occur if treatment is delayed.^{2,9,13}

Metritis and laminitis were major concerns after replacing the prolapsed uterus.^{4,7} In this case, the intrauterine infusion of antibiotic pomades (Terramycin) was intended to prevent infection. Gentamicin and procaine penicillin daily for five days was also used to prevent metritis. The antihistamine injections every twelve hours and checking the mare's feet were the steps taken to avoid the complication of

laminitis. Equine obstetric interference should be accompanied by prophylactic injections of tetanus antitoxin. Although tetanus antitoxin was not administered in this case, we did not encounter any complication.

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درمان جراحی پرولاپس رحم در یک راس مادیان : گزارش درمانگاهی

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توصیف بیمار- یک راس مادیان ۶ ساله که دچار پرولاپس رحم شده بود جهت درمان به درمانگاه دامپزشکی ارجاع داده شد. پرولاپس رحم پس از گذشت ۴ ساعت از زایمان طبیعی روی داده بود.

یافته های بالینی- ارزیابی های بالینی نشان داد که قسمت پرولاپس شده رحم (حدود ۶۰ سانتی متر) دچار احتقان و پرخونی بوده ولی بافت مخاطی آن ظاهری سالم داشت.

درمان و نتیجه- ابتدا برای جلوگیری از تنموس با استفاده از لیدوکائین ۲٪ به روش اپیدورال ناحیه میاندوراه بی حس گردید. سپس قسمت پرولاپس شده رحم با سالی نرمال شستشو داده شد و به دنبال تخلیه مئانه با سوند، رحم با دستکاری به موقعیت طبیعی خود در داخل لگن و حفره بطنی برگردانده شد. برای جلوگیری از عود مجدد پرولاپس، فرج به روش بوهنر بخیه گردید. تجویز عضلانی اکسی توسین، آنتی بیوتیک، فلونکسین مگلومین و محلول کلسیم گلوکونات به عنوان مراقبت های بعد از عمل به مدت ۵ روز به انجام رسید. **کاربرد بالینی-** در مادیان پرولاپس رحم یک عارضه شایع به دنبال زایمان نیست. جا انداختن رحم پرولاپس یافته در مادیان آسان است اگر سریع نسبت به درمان اقدام شود. در صورت تشخیص و درمان فوری، پیش آگهی معمولاً خوب است. **کلمات کلیدی-** پرولاپس رحم، مادیان، زایمان طبیعی، روش بوهنر.