MANAGEMENT OF DYSTOCIA FOLLOWED BY UTERINE PROLAPSE IN MARES - A REPORT OF TWO CASES

K.K. HADIYA#, J.J. PARMAR, A.J. DHAMI, J.A. PATEL AND A.I. SHAH

Dept. of Animal Reproduction Gynaecology & Obstetrics
College of Veterinary Science & Animal Husbandry, AAU, Anand- 388 001, Gujarat
#Corresponding author: E-mail: kameshhadiya@yahoo.co.in

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ABSTRACT

This communication puts on record the successful clinical management of dystocia due to stress induced abortion in one mare and uterine inertia with overdue gestation in another using oxytocin and digitally induced cervical dilation and forced extraction of fetus followed by uterine prolapse a few hours later in both the mares and their medical management.

Key words: Mare, Dystocia, Uterine prolapse, Uterine inertia, Abortion, Medical management

Parturition in the mare is an efficient and explosive event with all the three stages being over within 60 to 75 minutes in normal course. These highly coordinated events are crucial to the well-being of both the dam and the fetus (Steven, 2011). Dystocia and uterine prolapse, the common peri-parturient complications in bovines and ovines, are considered to be rather infrequent in equines (Roberts, 1971). Its occurrence in equine is usually as a sequel to the non-dilatation of cervix, the forced extraction of the fetus or retained placenta (Arthur *et al.*, 1996). Successful management through caesarean section of a rare case of dystocia due to ventro-transverse presentation with severe lateral deviation of ankylosed head, neck and limbs in a draft mare has been documented by Nakhashi *et al.* (2009), while Sharma (1996) and Kumar *et al.* (2010) reported dystocia due to congenital hydrocephalus and its successful management through partial fetotomy in mares. Krishnaswamy *et al.* (1985) and Khan *et al.* (1998) reported successful management of uterine prolapse in draft mares following abortion. The present report places on record management of dystocia due to non-dilatation of cervix and uterine inertia in two mares with post-foaling utero-vaginal prolapse.

A Marwari mare, 6-7 years old, with unknown breeding history from Valsad district of Gujarat was presented to the Veterinary College Clinic, Anand in the late evening 6.00 PM. The mare was purchased by the owner a few months back and was being brought to the College for treatment of non-responding small wound at the right fetlock joint. While long transportation (250 kms) the animal developed colic and laid down suddenly in the vehicle near Baroda. When reached to Anand, the mare was in lateral recumbency, straining continuously and was unable to pass the urine.

The animal was lifted from the vehicle in the lateral recumbency using a sling for further examination and treatment. The animal had rectal temperature of 105°F with shallow fast respiration and elevated pulse rate. Per rectal examination performed to rule out pregnancy before instituting any treatment revealed it to be advanced pregnant with voiding of vaginal discharge while palpating. Per vaginal examination revealed completely open cervical os and presence of fetal extremities in the birth canal, with normal presentation, position and posture of a live fetus. Strong straining bouts resulted in appearance of chorionic fred velvety bag≈

at the vulva within 3-4 minutes suggesting impending parturition/abortion. This bag was carefully opened with scissors and the allantoic fluid was released. A live foal of around 9 months gestation was then relieved within next 8-10 minutes with due care. Inj. Ceftrioxone 3 gm (Inj. Cefstan, Zoetis India Pvt. Ltd.) and Oxytocin 40 IU were administered i/v along with a drip of 2 litres normal saline. Inj. Dexamethasone sodium 20 mg (Dexona 5 ml, Zydus) and Neoprofen 10 ml were also given i/v and Tetanus Toxoid 5 ml (40,000 IU, Serum Institute of India) i/m.

The animal was kept under observation as an indoor-patient as the placenta was not dehisced and the mare did not got-up. A part of placenta hanging from the vulva created irritation and straining resulting in to a complication of uterine prolapse at 10.00 PM night with placenta still attached. This was however easily reset promptly under epidural anaesthesia using routine technique as used in bovines after separating the placenta and cleaning the prolapsed mass with normal saline. Vulvar sutures were taken to avoid recurrence. Injection 5% Dextrose saline 1 litre was given intravenously. The mare died in the early morning around 6.00 AM probably due to severe stress and toxaemia. The foal which was active till morning also collapsed at 10.30 AM.

An another advanced pregnant mare of 5th parity and around 17 years age, belonging to a farmer of Tarapur taluka in Anand, was admitted twice as an indoor-patient for 2-5 days duration during last 20 days at TVCC of the College for treatment of partial anorexia, colic and retention of urine. The animal responded to treatment without any complication and hence was discharged. It was again admitted one week later with history of anorexia, anurea and weakness. The mare was pregnant and gestation was overdue with engorgement of teat and mammary glands. During 5th day of indoor treatment, the animal suddenly showed rolling and straining in the early morning and became recumbent. Per rectal examination revealed presence of a normal live fetus in the uterus. Per vaginally the cervix appeared two finger open which on digital manipulation resulted in dilation allowing full hand to pass through within next 30 minutes. The animal was kept under observation and self-delivery, but no progress was found till next 5 hrs. Hence in the afternoon, the animal was administered with Tetanus Toxoid 5 ml (40,000 IU) i/m, Inj. Ceftiofur sodium 1 gm (Inj. Xyrofure, Intas Pharma) i/m, Inj. Inj. Flunixin + Meglumine (Inj. Megludyne 10 ml, Virbac) and Dexamethasone 20 mg i/v. Oxytocin 40 IU were given in the drip of 2 litre normal saline over 20 minutes, followed by 2 litres of 5% Dextrose saline. This resulted in uterine contractions and complete dilation of cervix. Re-examination per vaginum revealed a live fetus in normal presentation, position and posture, hence was delivered by forced extraction. The part of placenta remained hanging at the vulva. The mare developed severe straining resulting in partial uterine prolapse with placenta till attached (Fig. 1). This was promptly handled after giving mild sedation with Inj. Xylazine 5 ml (IIL) i/v. The part of attached placenta was removed manually, and the prolapsed mass was repositioned after thorough cleaning and lubricating. Two simple interrupted sutures were applied on vulva to retain the uterus in position.

Next day the mare was reported to be eating and drinking water normally without straining or other complications and had passed faeces, urine and lochial discharge. Inj. Ceftiofur sodium 1 gm (Inj. Xyrofure) and Inj. Flunixin + Meglumine (Inj. Megludyne 10 ml) i/m and Inj. Tribivet 10 ml i/v with a drip of 2 litre 5% Dextrose saline were administered for next 3 days. Vulvar sutures were removed next day. The animal made an uneventful recovery, and was discharged on 5th day.

Dystocia and postparturient diseases are uncommon in mares; however, when they do occur, they may carry a guarded prognosis for life or future fertility in affected mares. Prompt, sound clinical management of dystocia, retained placenta, and other post-parturient disorders can preserve the breeding potential of valuable mares. According to Mc Kinnon (2011), when the first or the second stage of parturition is prolonged or not progressing in the mare, a dystocia must be suspected and a prompt

veterinary examination is indicated to preserve the life of the foal and the mare, and to prevent lacerations of the reproductive tract. If the chorioallantois does not rupture and the velvety red surface of the chorioallantois is presented at the vulva (red bag delivery), it should be immediately ruptured and the foal be delivered, since this indicates that the placental separation has started impairing fetal oxygenation and the foal may die or develop problems associated with hypoxia later on even-though appear normal at birth.

Several drugs have been tried to induce parturition in the mare including administration of glucocorticoids, prostaglandins and oxytocin (Mc Kinnon, 2011). Purvis (1972) described the successful induction of over 1500 foaling with an intramuscular injection of oxytocin, either with or without priming with stilbestrol dipropionate. Macpherson *et al.* (1997) have suggested various methods of oxytocin administration such as i/m injection of 40 to 120 units at once, i/v, i/m or s/c injection of 5 to 20 units at every 15 to 20 minutes intervals and i/v drip of 60 to 120 units in 1 L saline solution @ 1 unit/min until the second stage of labour ensues, to induce parturition as the uterus of the term mare is very sensitive to the effects of oxytocin, and the response is dose-dependent.

Uterine prolapse in equine is considered to be rather infrequent, with most of the isolated cases reported to occur during the immediate postpartum (Hastings and Miller, 1983). Krishnaswamy *et al.* (1985) and Khan *et al.* (1998) reported successful management of uterine prolapse in draft mares following abortion. A long mesometrium and flaccid pelvic viscera and the perineum associated with parturition probably predispose certain mares to prolapse. It has also been suggested that the free portion of the placental membrane, which remains hanging from the vulva, exerts traction on the uterus and invariably leads to the uterine prolapse (Arthur *et al.,* 1996). In the present cases, the delivery of foetus was effected by forced extraction following stress induced or digital cervical dilation and the fetal membranes were not shed even after 4-6 hrs of delivery leading to frequent straining and lateral recumbency, which could have predisposed the mares to the uterine prolapse. Moreover, in first mare premature delivery was induced through transport stress, while in second case the pregnancy was overdue and the mare was under treatment for general weakness and inappetance requiring induced cervical dilation. Further the ease with which prolapsed mass could be set suggested that probably uterine inertia was also a predisposing cause for prolapse.

FIG 2 : UTERINE PROLAPSE

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