

MANAGEMENT OF DYSTOCIA DUE TO PRIMARY UTERINE INERTIA IN A MARE

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Abstract: Dystocia in mare is a very rare and occurs occasionally. The present case of maternal dystocia in 5 year old mare has been reported due to primary uterine inertia. The dystocia was managed successfully with assisted delivery of female live foal following intravenous oxytocin administration.

Keywords: Dystocia, Mare, Primary uterine inertia, Oxytocin.

Introduction

All the three stages of foaling in the mare are very rapid as compared to other animals and are within 60 to 75 minutes in normal course. These highly coordinated events are important to the well-being of both the mare and the foal (Steven, 2011). Dystocia is defined as any birth that reduces neonatal viability, causes maternal injury, or requires assistance during delivery (Purohit and Honnappagol, 2009). It occurs less frequently in mares as compared to other domestic animals, but when it occurs it is considered true emergencies (Ollie Pynn, 2014), where minute mistakes make a difference in the survival of the foal or mare (Wilkins, 2008). The incidence of dystocia varies among breeds, with the incidence in Thoroughbreds about 4% and incidence due to uterine inertia is approximately 2% (Frazer *et al.*, 1997b). A high proportion of the dystocia occur in primiparous mares (Ball, 2005). The mare is comfortable during the first stage labor with a relaxed cervix but does not initiate second stage (Frazer *et al.*, 1997b). Dystocia must be suspected if the first stage of labor is very long or foal not born in 20-30 minutes of rupture of fetal membranes and release of fluids. The present case is a documentary record of dystocia due to primary uterine inertia in a mare and its successful management.

Case History and Clinical Observations

A Five year old mare in her first parity was presented to Teaching Veterinary Clinical Complex, Nagpur Veterinary College, Nagpur with history of full term gestation and straining with attempt to foaling seen about 2 days before. The mare was dull, depressed and anorectic. There was engorgement of teat and presence of wax in mammary glands. The recorded rectal temperature was normal (101.2⁰F). Per-vaginal examinations revealed that the cervix was partially dilated and foal was fully covered with its placenta. The feeling of pedal reflex was positive after pinching of foetal forelimbs. The foetus was in anterior longitudinal presentation and dorso-sacral position. But there was no uterine contraction and straining seen. Because foetus was alive, our aim was to deliver a live foal as quickly as possible and with minimal interference and trauma to the mare. So, it was decided to treat the case as a uterine inertia.

Treatment and Discussion

Before the start of the treatment, the mare was restrained in a Trevis to control and safety during management of dystocia. As cervix was partially open, foaling was induced by oxytocin injection (50 I.U.) slow intravenously in 2 litres of Dextrose 5% solution over about 20 minutes. The uterine contraction was started following oxytocin injection and after half an hour later cervix was fully dilated. A velvety red surface of the chorioallantois was presented at the vulva during foaling (Figure - 1). Re-examination per vaginum revealed a live fetus in normal presentation, position and posture. Hence it was decided to deliver by forced extraction as quickly as possible (Figure - 2). A live female foal foetus was delivered by manual traction (Figure - 3). After relieving of dystocia, placenta (Figure - 4) was removed manually and four furea boluses were inserted into uterus. Further, injection Intacef 3.5 g, Injection Melonex 15 ml, Injection Tonophosphan 15 ml and injection Anistamin 10 ml were administered intramuscularly. Mare was discharged from the clinics after proper advice for post-obstetrics care and management for further few days.

The disturbance or nervousness during foaling leads to development of primary uterine inertia. This can be resolved by overcoming disturbance and giving oxytocin to the dam. In a normal delivery, the chorioallantois is thought to remain attached to the endometrium until after the foal is delivered. Separation of fetal membrane will deprive the fetus of oxygen and this is the critical factor for viable foal. In the present case chorioallantois was attached to the endometrium due to which a live foal was delivered.

According to Mc Kinnon (2011), when the first or the second stage of parturition is prolonged in the mare, a dystocia must be suspected and a quick examination is taken by the veterinarian to preserve the life of the foetus and the dam. Several drugs have been tried to induce parturition in the mare including administration of glucocorticoids, prostaglandins and oxytocin (Mc Kinnon, 2011). In addition, Hadiya *et al.* (2015) successfully managed dystocia due to uterine inertia with overdue gestation using oxytocin and digitally induced cervical dilation and forced extraction of fetus in mare. More than 1500 foaling induced with an intramuscular injection of oxytocin, either with or without priming with stilbestrol dipropionate by Purvis (1972). 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 (Macpherson *et al.*, 1997). In conclusion, although dystocia due to uterine inertia is rare in mare, it may be managed by administration of oxytocin to save the life of both dam and foetus.

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Figure 1: Velvety red surface of the chorioallantois



Figure 2: Assisted foaling



Figure 3: Delivered female live foal



Figure 4: Placenta of Mare after foaling