

## A SUCCESSFUL OBSTETRICAL APPROACH TO DYSTOCIA IN MARES DUE TO FETAL POSTURAL DEFECT

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**Abstract:** Equine dystocia is a true emergency as it can lead to the death of the foal, mare, or both. The incidence of dystocia is less in equines as compared to other domestic animals. Dystocia in a full-term pregnant mare due to fetal postural defect is a challenging condition for equine practitioners. Malposition of long fetal extremities, head, and neck are the major causes of dystocia in mares. In this case report, we present a full-term pregnant mare who failed to deliver the fetus even after 10 hours of rupturing the water bags. The examination revealed knee flexion of the right forelimb of the fetus and a dried birth canal, indicating dystocia due to postural defect. After administering sufficient lubrication and correcting the postural defect, a dead female fetus was successfully delivered with coordinated forced traction. The mare was successfully treated with follow-up therapy and advice. Rapid appropriate intervention, correct diagnosis, and proper obstetrical approach are crucial for the survivability of the dam and foal, as well as the future fertility of the dam. Equine practitioners need to be aware of the possibility of dystocia due to fetal postural defects in full-term pregnant mares and be prepared to intervene early. Future research should focus on preventive strategies to reduce the incidence of dystocia in mares.

**Keywords:** equine dystocia, postural defect, fetal malposition, forced traction, obstetrical approach

### Introduction

Dystocia in mares is a challenging condition for equine practitioners, and it is considered a true emergency. Failures of foal to adopt a normal posture at term predispose dystocia in equines. Malposture of fetal extremities, head, and neck are the major cause of dystocia in mares. Compared to other domestic animal species, equine species are less prone to difficult delivery. However, when equine dystocia occurs, it is considered a true emergency because of their value. Equine practitioners must be prepared to act quickly and decisively to ensure the survivability of the dam and foal. In this case report, we describe a full-term pregnant mare with dystocia due to postural defect. We also highlight the importance of early appropriate intervention, correct diagnosis, and proper obstetrical approach for the survivability of the dam and foal, as well as future fertility of the dam. This report aims to raise awareness among equine practitioners of the possibility of dystocia due to fetal postural defects in full-term pregnant mares and emphasizes the need for preventive strategies.

### Case history and observation

A full term pregnant mare was presented to Veterinary Clinical Complex DUVASU, Mathura with the history of rupture of water bags 10 hours before. The case was handled by a paravet also but could not deliver the fetus. Mare was showing straining and restlessness. On general clinical examination, mare was depressed and having congested mucous membranes. Per vaginal examination revealed that birth canal was dried and cervix was completely open. Further examination revealed that knee of right forelimb was flexed and the fetal reflexes were absent. Fetus was in anterior longitudinal presentation and dorso-sacral position. Based on history and vaginal examination case was diagnosed as dystocia due to postural defect.

## **Treatment**

Mare was restrained in the right lateral recumbency (Figure 1). Mare was administered with Inj. tetanus toxoid @ 5 ml i/m, Inj. ceftriaxone @ 3 gm i/m, Inj. flunixin meglumine @ 1000 mg i/m, Inj. dexamethasone @ 40 mg i/m, inj. pheniramine maleate @ 10 ml i/m, Inj. dextrose normal Saline @ 3 litres i/v and normal saline @ 3 litres i/v. Epidural anesthesia was administered at first inter-coccygeal space with 5 ml of 2% lignocaine hydrochloride solution. As the birth canal was dried therefore birth canal was lubricated by liquid paraffin. Firstly, the flexed right fore limb was extended manually. Eye hooks were applied in the both eye canthus and head of the fetus was brought in the birth canal. Thereafter, Moore's obstetrical chains were applied at the fetlock joint of both fore limbs and with the help of coordinated forced traction, the dead female fetus was delivered (Figure 1). Whole placenta came out along with the fetus. The uterus was examined for any injury but there was no such damage. Thereafter, intrauterine therapy was given. For next three days, antibiotic, NSAID, antihistaminic and supportive therapy were advised. Animal recovered within next five days.

## **Discussion**

Fetal maldiposition is one of the major cause of dystocia in mares (Dugdale, 2007). The incidence of maternal cause of dystocia in mare is less than fetal cause of dystocia (Jackson, 2004). Any fetal disposition other than anterior presentation, dorsal position and normal posture is likely to result in dystocia (Sane et al., 1994). Abnormal postures includes lateral deviation of head and neck appears to be preponderance cause of severe dystocia (Dadarwal et al., 2008; Frazer, 2009), Wry neck posture (Rice, 1994), deviation of head-vertex, nape and breast head posture (Yuongquist, 1986), carpal flexion posture (Nahkashi et al., 2008), shoulder flexion unilateral (Swimming posture) and bi-lateral (Diving posture) (Christensen, 2008), foot nape posture (Dugdale, 2007), hock flexion posture, breech presentation (Frazer et al., 1997). In the present case, epidural analgesia followed by ample lubrication with liquid paraffin was infused and fetus was delivered per-vaginally by obstetrical mutation procedure. In difficult cases, fetus can be removed by either fetotomy or caesarean section (Youngquist, 1986).

## **Conclusion**

A delay in delivery after rupture of the chorioallantoic membrane may be critical for life of the foal. Therefore, rapid appropriate intervention, correct diagnosis and proper obstetrical approach is required for survivability of dam and foal along with future fertility of dam.

## **References**

- Christensen, B. (2008). Managing dystocia in the mare. Proc Central Vet Conf Baltimore pp 1-5.
- Dadarwal, D., Honparkhe, M., Dhaliwal, G.S. (2008). Dystocia in mare due to lateral deviation of head in congenitally deformed foal. Indian J Anim Reprod 29: 228-29.
- Dugdale, D.J. (2007). Dystocia. BEWA Equine Stud Medicine Course pp 225-28.
- Frazer, G. (2011) Dystocia management. In: Equine Reproduction, 2nd edn., Eds: A.O. McKinnon, E.L. Squires, W.E. Vaala and D.D. Varner, Wiley-Blackwell, Chichester.pp. 2479-2496.
- Frazer, G.S. (2009). Dystocia management on the farm. 15th SIVE Congress Proc Annu Meet Italian Assoc Equine Vet. pp. 57-59.

- Frazer, G.S., Perkins, N.R., Blanchard, T.L., Lock, T.F., Sertich, P.L., Baker, G.J, Vaala, W.E. (1997). Prevalence of fetal maldispositions in equine referral hospital dystocias. *Equine Vet J* 29: 111-116.
- Jackson, P.G.G. (2004). *Handbook of Veterinary Obstetrics* 2nd ed Saunders Elsevier Missouri.
- Nahkashi, H.C., Suthar, B.N., Patel, R.M. (2008). Fetal dystocia in mare- case reports. *Intas Polivet* 9: 86-88.
- Norton, J.L., Dallap, B.L., Johnston, J.K., Palmer, J.E., Certich, B.L., Boston, and Wilkins, P.A. (2007). Retrospective study of dystocia in a mare at a referral hospital. *Equine Veterinary Journal*, 39: 37-41.
- Purohit, G.N. (2011). Infraprtum conditins and their management in mare J. *Livestock Sci.* 2:20-37.
- Rice, L.E. (1994). Dystocia- related risk factors. *Vet Clin North Am Food Anim Pract* 10: 53-68.
- Sane, C.R., et.al. (1994). *Reproduction in farm animals (Theriogenology)*. 2 nd. Edn. Verghese Publishing House, Bombay. pp:103.
- Thangamani, A., Srinivas, M., Chandraprasad, B., and Phanikumar, L. (2018). Periparturient event and dystocia in equine- A review. *Int. J. Sci. Environ. Tech.* 7(2): 648– 658.
- Wilkins, P.A. (2008). Dystocia: A true emergency of the horse. *Proceedings European Equine Meeting XIV SIVE/FEEVA Congress Venice Italy*. pp. 285-289.
- Youngquist, R.S. (1986). *Equine obstetrics In: Current Therapy in Theriogenology*. Ed.
- Morrow. D.A. W.B. Saunders Co. Philadelphia, U.S.A.