

Case Report

Surgical Management of Foetal Dystocia in a Jenny- Case Report

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ABSTRACT

A full-term pregnant jenny was presented with a complaint of straining since yesterday and difficulty in foaling. There was a history of labour since the last night & rupture of the foetal bag, 6 hours ago. Fetal origin dystocia, with an anterior longitudinal presentation, dorso-sacral position with lateral deviation of the head, and one forelimb hanging out from the vagina and was identified. Due to insufficient room in the birth canal, manual recovery of the foal was unsuccessful; therefore, a caesarean section was performed.

Keywords: Jenny, Caesarean section, Dystocia, Longitudinal presentation, Lateral deviation

Dystocia in equids, is always an emergency condition because within an hour of onset of second stage of labour, placental separation from lining of the uterus begins and leads to progressive asphyxia of foal (Noakes, 2018). The second stage typically lasts between 10 and 30 minutes and begins with allantochorion rupture and finishes with foal expulsion. If signs of foaling are seen within 20 minutes of initiation of stage 2 labour, the jenny should be evaluated for dystocia (Canisso *et al.* 2019). Obstetric instances in donkeys have been reported, amounting to 1-4 percent, but the prevalence and pathogenesis are poorly understood (Threlfall, 2007). Common causes observed in equines includes a lateral deviation of head and neck, foetal monsters, and foetal malpostures (Tibary *et al.* 2006), however, the actual incidence of various causes of dystocia among donkeys is not known.

The general principles used to manage horse dystocia (assisted vaginal delivery, controlled vaginal delivery, fetotomy and caesarean section) are also applicable to donkeys. However, the foal's long extremities make per-vaginal delivery

challenging. An option to resolve dystocia when the foal is dead is certainly represented by fetotomy. But in some breeds like miniature horses or jennies, this is very difficult to achieve (Gandini *et al.* 2013). For this reason, the caesarean section of these animals was preferred since the donkey is also a species of miniature *Equidae*.

History and Gynaecologic-clinical observations

A full-term pregnant jenny was brought to Veterinary Clinical Complex, Veterinary College at Anand with a complaint of continuous straining since past one day and unable to deliver the fetus, with one forelimb of the fetus hanging out the vulva. The water bag had ruptured 6-8 hrs ago. Futile efforts were attempted by Veterinarians at door step. The animal was restless, having continuous abdominal straining, and signs of colic, but failed to deliver a foal. Rectal temperature was elevated (103.9° F).

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After proper restraining, a thorough vaginal examination was carried out. The foetus did not show any reflexes. Foetus was in anterior longitudinal presentation, dorso-sacral position, one forelimb of the fetus was extended in the birth canal and another forelimb was flexed with severe lateral deviation of head.

Obstetrical Management

Attempts were made for repositioning the fetus through vaginal manipulation but to no avail. After failing the vaginal delivery, it was decided to perform a caesarean section to deliver the fetus.

A caesarean section was performed under general anaesthesia by using xylazine @ 1.1 mg/kg bodyweight IV as premedication and sedation (for induction). Induction is followed 2-3 minutes later by ketamine @ 2.2 mg/kg IV and xylazine @ 1.1 mg/kg IV in combination for maintenance. Diazepam @ 0.05 mg/kg IV was given concurrently in divided doses to reduce ketamine reflex activity.



Fig. 1: Removed fetus after C-section in jenny

By placing the animal in dorsal recumbency, the ventral midline site was prepared aseptically. The abdomen was entered through around 30 cm ventral midline incision, extending from slightly caudal to the umbilicus and cranially, the uterus was located and palpated, and an incision site over the foetal limb was chosen. This area was exteriorized as

much as possible and the uterus was incised using a scalpel and the foal was removed. It was observed that the allanto-chorion was twisted between the hind legs of the foal which was cut off and removed along with the dead fetus by giving traction to the foetal hind limbs. Haemorrhage from the uterine incision was controlled by applying continuous sutures through all the layers of a uterine wall along the edges of the incision after the placenta has been detached from this area and removed. Cefalexin powder was placed intra-uterine. The uterus was closed by using a double layer of inverting sutures (no. 1 chromic catgut) after flushing the uterine lumen with metronidazole solution. The abdominal cavity was closed in standard manner. The animal recovered from anaesthesia uneventfully after 15 to 30 minutes of surgery.



Fig. 2: Exteriorized uterus during C-section in jenny

Tetanus prophylaxis @1500 IU, antibiotics (ceftiofur sodium @2.2 mg/kg IM), and oxytocin (5 IU q6h IM) were administered. Antiseptic dressing for 10-12 days was performed. The female donkey was administered with supportive therapies (5 litres of normal saline IV), and anti-inflammatory medication (Flunixin meglumine @1.1 mg/kg IV and Chlorpheniramine maleate @0.4 mg/kg IM). The supportive treatments were continued further for five days. Jenny was discharged and follow-up treatment and management was advised for five days. Owner was advised to give her a soft,



palatable diet & allow her to rest. The animal recovered without any complications.

Discussion

Owner education is essential as many donkey owners are often inexperienced, unprepared or unaware that their jenny is in foal. In horses, the covering date is usually known due to well-managed farm practices and the gestation period is more defined (Chauhan *et al.* 2013). Whereas longer gestation length & its greater variability (ranging from 11 to 14.5 months) in donkeys, can make it very hard to predict the expected date of delivery and to define a premature donkey foal (Matthews *et al.* 2003). Equine dystocia, though uncommon, is a true emergency and threatens the dam's survival and fetus (Freeman *et al.* 1999a; Chauhan *et al.* 2019).

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