



Therapeutic with Obstetrical Management to Deliver Live Three Male Foetuses in a Surti Doe

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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Case Report

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ABSTRACT

Dystocia is common occurrence in small ruminants like goat and sheep. A case tentatively diagnosed as a foetal dystocia due to foetal dorso-pubic position and malpostures of foetus in seven year old surti doe based on the history, clinical signs and vaginal examination. The present case described a successful delivery of three live male foetuses by obstetrical mutational approach following therapeutically intravenous administration of 20IU- Oxytocin, 30ml-calcium borogluconate and 500ml Normal saline, whereas 5ml valethamate bromide and antihistamine were administered intramuscularly. Supportive therapy various fluids, analgesic, antibiotic and intra-uterine pessaries, resulted a affected Surti doe to normal health within few days.

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1. INTRODUCTION

Dystocia means difficult birth; the diagnosis and treatment of dystocia constitute a large and important part of the science of obstetrics, and require a good understanding of normal parturition [1]. Malpresentation is one of the common causes of dystocia especially in case of twin pregnancy [2]. The incidence of dystocia varies between 8 to 50% in both sheep and goat and appears to be greater in dams carrying single male foetus [3]. Close examination of the foetus in the birth canal will readily reveal the cause for dystocia. Dystocia can be caused by either maternal or fetal problems. The majority of cases are reported are foetal problems, mainly malpresentation, abnormal position or posture of the foetus. The paper record foetal dystocia due to abnormal position (dorso- pubic) and posture (carpal and shoulder flexion) of foetus with incomplete cervical dilatation in a Surti doe and its successful management per-vaginally.

2. MATERIALS AND METHODS

2.1 Case History, Clinical Observation and Pre-medicinal Treatment

A seven year old Surti doe in its 5th parity was presented to the Animal Obstetrics unit of Dr. V. M. Jhala Clinical Complex, SDAU, Dantiwara, Gujarat with a history of complete gestation period, straining, restlessness and tenesmus since last one day and water bags which had already ruptured a few hours ago. Physiological parameters recorded temperature, (103.9 °F) and respiration rate (42/minute) were in normal clinical range while the heart rate was slightly elevated (79/minute) indicating mild tachycardia.

The doe was partially anorectic, dull, depressed and slightly dehydrated with standing condition. The doe was frequently getting up and down showing extreme abdominal pain.

Clinical examination revealed pinkish conjunctival (Fig. 1) and vaginal mucous membranes, mammary glands fully engorged with milk (Fig. 2), tinched vulval lips with abnormal dark reddish colored discharge and dark reddish chocolate coloured discharge on the floor (Fig. 3). Abdominal ballottement and palpation revealed doughy freely moveable masses on the left flank region suggesting the presence of foetuses. On proper lubrication using liquid paraffin with antiseptic, per-vaginal examination revealed that vagina was relaxed; cervix had only four finger dilation, so that it was difficult reach up to the foetus and touch or palpated. So, decided to pre-medicate the doe (Fig. 4) with intravenous administration of 3.0 ml-Dexamethasone[®], 20IU Oxytocin[®], 500ml Normal saline, and 30ml calcium borogluconate, whereas 5 ml valethamate bromide (Epidosin[®]) was given intramuscularly. Per-vaginal examination three hours following pre-medicinal treatment ensuring adequate precautions revealed a fully dilated and relaxed cervix with a live foetus in anterior-longitudinal presentation, dorso-pubic position and bilateral flexion of carpal and shoulder joints lying beneath the body of foetus. Forehead of fetus was palpable at pelvic brim, but the fetal abdomen was found greatly distended above the brim and tense with lot of fluid. Based on the history, clinical signs and per-vaginal examination, the case was diagnosed as a foetal dystocia due to fetal dorso-pubic position with malpostures and incomplete cervical dilatation.

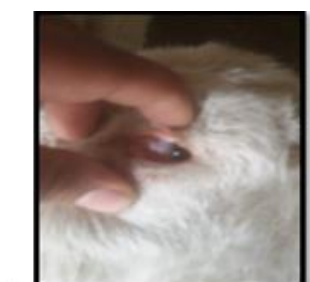


Fig. 1. Pinkish Conjunctival mucus membranes



Fig. 2. Mammary glands fully engorged with milk



Fig. 3. Abnormal dark reddish colored discharged was observed



Fig. 4. Doe was pre-medicated



Fig. 5. Specific antiseptics per-vaginal examinations

2.2 Obstetrical and Therapeutic Management

Following confirmatory diagnosis of foetal dystocia due to fetal malposition and malpostures, careful repelling of the foetus into abdominal cavity of doe was done. - later, attempts were made per-vaginally to deliver the foetus by forced extraction resulted in the delivery of first live male foetus (Fig. 6). Proper lubrication of the birth canal using liquid paraffin and rinsing the perianal region with the 1% potassium permanganate lotion was done during the procedure, which subsequently, two other live male foetuses of similar size were also delivered by grasping tiny fore limbs and manually applying forced extraction on the foetus in same manner.

Then the doe was post-medicated (Fig. 7) intramuscularly by administration of 3ml Chlorpheniramine maleate[®] (Antihistamines), 5ml Vitamin B-complex Injection, Melonex[®] (Meloxicam-Intas, India) @ 0.5mg/kg. b.wt. IM OD and Quintas[®] (Enrofloxacin-Intas, India) @ 5 mg/kg. B.wt. IM OD; whereas 500ml Dextrose normal saline was given intravenously along with

placement of two Furea bolus (control the uterine infection- Allopathic remedies, India) in the uterus. Liquid Exapar[®] (Indigenous herbal uterine cleanser and restorative-Natural Remedies, India) @ 20 ml twice PO and liquid Gluca-boost (To maintain the energy/glucose-Natural Remedies, India) @ 30ml twice PO was also advised. Intramuscular treatment using antibiotic, analgesic and antihistamine was continued for 5 more days.

3. RESULTS AND DISCUSSION

Information of the patient was taken telephonically on every alternate day following discharge from hospital. The doe was found active and alert resuming normal appetite within a six days post treatment and recovered uneventfully. In this present case, three live male foetuses (Fig. 8) were delivered successfully by correct position and postures of foetus with manually applying mutational approach and forced extraction. In this clinical case, the foetal abnormal posture characterized by bilateral carpal and shoulder flexion, was the cause of dystocia wherein both forelimbs



Fig. 6. Delivered first male foetus (Anterior presentation with dorso-pubic position)



Fig. 7. Doe was post-medicated



Fig. 8. Delivered three live male foetuses from Doe

were flexed at the knee joint region and shoulder joint.

Numerous variables impact the goats' ability to reproduce, perhaps leading to a decline in population size as a result of the death of the fetus or dam. Dystocia was one of the main factors that caused significant financial losses (Rehman et al., 1999). Goats with reproductive disorders have been shown to have a 7 percent incidence of dystocia (Rehman et al., 2000). It has been noted that dystocia can have either fetal or maternal origins. According to recent research, maternal causes of dystocia were less common than those arising from the fetus [4]. The result of fetal malformation is morphological deformities, which subsequently affect how internal organs operate.

In domestic animals, congenital hydrocephalous disease is inherited through an autosomal recessive gene, while nutritional variables and foetal viral infections may have contributed to its genesis (Bester et al., 1976). Fetal hydrocephalus is primarily caused by a genetic factor and vitamin A deficiency [5]. In addition to these, etiological agents include infectious agents, dwarfism, hydroamnion, and elevated liver copper levels [6]. Smooth and pliable cranial bones were observed in cases of prenatal hydrocephalus by Noakes et al. [7]. The fetus's malformed mandible, ears, and eyes were observed by Divya and Chaithanya's [8].

In ruminants, males foetuses are more frequently associated with dystocia than female foetuses

and male carries one day longer gestation than the female counterpart [9]. Earlier reports recorded dystocia which involved a male or a female live or dead foetuses respectively, with forelimbs carpal and shoulder flexion [10]. This is one of the most common cause of dystocia which can be easily corrected [11]. Majeed and Taha [12] recorded a few obstetrical procedures to remove the foetus : (1) mutation to correct abnormal presentation, position and posture of fetus by manipulation, (2) traction where application of outside force used to assist dam to expel foetus, The other main reasons for dystocia of live fetus in the present case were incomplete cervical dilatation, uterine inertia and foetal abnormal posture. In short, this case report described the successful management of foetal dystocia in a doe using pre-medicinal treatment combined with obstetrical mutational approach [13-15].

4. CONCLUSION

This case concluded that, by determining the factors rapidly, the occurrence of foetal dystocia can be managed by judicious diagnosis and timely interventions which can save the life of the dam as well as the foetus and prevent economic losses. In this case, the prognosis of the doe was good with further breeding.

ETHICAL APPROVAL

Animal Ethic committee approval has been collected and preserved by the author(s).

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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