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Dystocia Due to Incomplete Cervical Dilatation and Breech Presentation of Fetus in a Goat

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ABSTRACT

In the Referral Veterinary Polyclinic, ICAR-Indian Veterinary Research Institute, Bareilly, a case report of a pregnant doe aged 2 years old who was unable to deliver the fetus was presented. Due to insufficient cervical dilation, doe was unable to deliver the fetus, resulting in dystocia. Induction treatment was done along with CMC massaging of cervix for 10 minutes after every 30 minutes. After 2 hours of this therapy the cervix was fully dilated and the appearance of water bags was observed. Then per vaginal examination was done and fetus were observed in posterior presentation which were delivered by traction. Both live fetuses were having myxoedema and one fetus was without hairs which is characteristic of congenital goiter in kids. This case report describes an instance of dystocia in a goat caused by ICD and due to breech presentation of fetuses. The fetuses were delivered successfully.

Keywords: Doe, Dystocia, Myxoedema, Goiter, Breech Presentation.

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INTRODUCTION

Causes of dystocia can be differentiated according to maternal and fetal origin, though most reports showed that fetal mal disposition (particularly lateral displacement of the head) and obstruction of the birth canal (particularly inability of the cervix to expand) are the most common causes of dystocia in goats (Purohit *et al.*, 2006). Maternal dystocia was caused

primarily by insufficient cervical canal dilation, followed by a narrow pelvis and uterine inertia (Purohit, 2006). Failure of cervical dilatation is a major cause of ovine dystocia (Balasopoulos *et al.*, 2022; Brounts *et al.*, 2004). In a study it was observed that 45.5% of the dystocia cases were because of failure of cervical dilatation (Purohit *et al.*, 2006). Also, congenital goiter in kids can also lead to dystocia in goats as this condition is characterized by an increase in fetal size along with myxedema and prolonged gestation (Kujur *et al.*, 2021). Congenital goiter is a common aberration in goats and is defined as a non-inflammatory and non-neoplastic enlargement of the thyroid gland in the fetus (Cheema *et al.*, 2010). The current study discusses a case of incomplete cervical dilatation along with congenital fetal goiter in kids, which resulted in dystocia.

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CASE HISTORY AND OBSERVATIONS

A two-year-old full term pregnant doe in her first parity was brought to Referral Veterinary Polyclinic, ICAR-IVRI, Bareilly with the history of straining since 14-16 hours. Animal was in an active state but feed and water intake were reduced. There was a mild rise in temperature. Per vaginal examination revealed only one finger dilatation of cervix, so it was diagnosed as a case of dystocia due to incomplete cervical dilatation (ICD).

TREATMENT AND DISCUSSION

For increasing the degree of cervical dilatation, induction therapy was given along with CMC massaging of cervix with to and fro movement of fingers within external os of cervix for 10-15 minutes. In induction therapy, slow I/V inj. of Valethamate bromide (Epidosin) -20 mg, calcium sandoz-5 ml, dexamethasone (Dexona) -12.5 mg and I/M Inj. of Cloprostenol (Estrumate)-250 µg was given. The case progressed after 30 minutes, as evidenced by 2 to 3 fingers of cervical dilatation. Further CMC massaging of the cervix was performed for 10-15 minutes. Then after another 30 minutes the first water bag emerged and ruptured. On further per vaginal examination, a fetus was palpated in posterior presentation. Then by grabbing both hind limbs together, the fetus was delivered by traction with hands. After that one another fetus was palpated in posterior presentation only on per vaginal examination, which was also delivered by same procedure. Both foetuses were alive, with one male and one female sex. After removal of fetal kids, the genital tract was examined to rule out any injury in the genital tract. On gross examination both kids were found to have myxedema with one fetus without body hairs which is the characteristic of congenital goiter (Cheema *et al.*, 2010). There was an enlargement observed in the upper neck region of both the fetus along with alopecia in one of the fetuses (Fig.1). In post-operative treatment, Inj Oxytocin 3 ml I/M, Inj. Enrofloxacin (Enrocin) 3 ml I/M and Inj. Melonex 2ml I/M was given. Uterotone liquid was prescribed @ 30 ml daily for 15 days. The goat was discharged after receiving regular antibiotics and supportive care.

In young animals, at their first parturition, there is a higher prevalence of the ring womb condition. Ring-womb is not connected with breed, age, or body condition score, however it is strongly associated with a greater lambing percentage or number of fetus born. Ring-womb has been seen in both purebred and crossbred females.

In humans and animals, goiter is a well known disease caused by iodine deficiency. Low iodine intake and ingestion of goitrogenic substances are two causes of iodine shortage in animals (Schone and Rajendram, 2009). Iodine shortage occurs when the thyroid gland does not have enough iodine to operate properly. Thyroid hormones are essential for thermoregulation, metabolism and energy production, growth, reproductive health, immune system efficiency, muscular function, and circulatory system regulation (Herdt & Hoff, 2011). Thyroid hormone synthesis, storage, and secretion disorders provide the molecular basis for thyroid growth irregularities or thyroid Dyshormonogenesis, which culminates in congenital hypothyroidism or goiter (Vijlder, 2003). Goitre is typically detected in lambs and kids shortly after birth. Because of poor thermoregulation, decreased surfactant secretion, decreased cardiac output, and arrhythmia, this disease reduces the survival rate of lambs and kids (Schone and Rajendram 2009; Singh *et al.*, 2002). As a mineral element, iodine cannot be synthesized in the body. Soil and consequently plants are the primary sources of iodine, so in iodine deficient areas it should be supplemented in diet to avoid this congenital condition

Fig. 1: Fetuses of goat affected with goitre and alopecia in one of fetus

CONCLUSION

In the present case there was dystocia due to ICD and breech presentation of the fetus. Incomplete cervical dilatation was corrected by CMC massaging and induction therapy. Fetuses were delivered by traction.

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CONFLICT OF INTEREST

Authors do not have any conflict of interests to declare.

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