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Clinical management of dystocia due to incomplete cervical dilation in goat: Case report

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Abstract
The incidence of dystocia appears to be greater in dams carrying single and male fetuses. Dystocia causes economic losses for goat farmers. The goal of the present case study was to illustrate the successful clinical management of dystocia caused by ICD or ringwomb. The Veterinary Clinical Complex, ANDUAT, Ayodhya, U.P., received a nondescript doe of first parity with a full-term pregnancy. She had a history of lower abdominal distention and straining for the last 12 hours without advancing into parturition. The animal was treated effectively with DNS, Dexona, Epidosin, CPM, Pregma, and Tribivet. Two dead fetuses were delivered manually with moderate traction.

Keywords: Dystocia, ringwomb, incomplete cervical dilation, goat, pregma, epidosin

Introduction
According to Ghosh *et al*. (1992) [11], Purohit *et al*. (2006) [17], Braun Jr. (2007) [5], Ali (2011) [1], and Bhattacharya *et al*. (2015) [3], in does, the main maternal cause of dystocia is the failure of cervical dilatation, also referred to as the "ring womb." ICD was the primary cause of maternal dystocia, which was followed by uterine inertia, small pelvis, and inefficient straining (Franklin, 1986; Majeed and Taha, 1989; Thomas, 1992; Noakes *et al*., 2009; Purohit, 2006) [10, 13, 19, 15, 17]. Uterine torsion, monsters, and twins presenting at the same time are additional causes (Ali, 2011) [1]. Compared to older animals, ICD was more commonly seen in young animals during their first pregnancy (Majeed and Taha, 1989; Edwards, 1952; and Edwards and Jones, 1957) [13, 7, 8]. The condition has been linked to a number of predisposing factors, including breed, season, first parturition, twinning, and hormonal and mineral imbalances (Edwards, 1952; Edwards and Jones, 1957; Stubbings, 1971; Hindson and Turner, 1972) [7, 8, 18, 12]. According to Majeed and Taha (1989) [13] and Ghosh *et al*. (1992) [11], the death rates for kids born to ringwombed does were 29% and 31%, respectively.

Case History & Observation
A seven-month-old, nondescript doe in her first parity with full term was presented at Veterinary Clinical Complex, ANDUAT, Ayodhya, Uttar Pradesh. There was a history of straining for the past 12 hours, and there was abdominal distention with slight discharge from the vagina. Physical examination revealed enlargement of the udder and slight swelling of the vulvar lips. The fetal skeletal components were felt in the belly, floating with no fetal responses. The animal was found dull and depressed. A per vaginal examination was performed, and the dilatation of the cervix recorded was hardly one finger. The case was diagnosed as dystocia due to incomplete dilatation of the cervix (ring womb).

Fig 1: Per-vaginal examination

Fig 2: After clinical management

Fig 3: Dead fetus delivered after manual gentle traction

Treatment

Injection DNS 500 ml I/V, CPM (antihistaminic) 7 mg, Epidosin (cervical dilator) 4 ml, Dexamethasone (glucocorticoid) 2 ml, Pregma (leutolytic agents) 1 ml, and Tribivet 2.5 ml intramuscularly helped stabilize the animal initially. The water bag ruptured five hours after the medication was administered. A completely dilated cervix with palpable fetal components in passage was found during a pervaginal re-examination. Manual gentle traction helped to relieve the fetus since there were fewer contractions in the abdomen or uterus following full cervical dilation. A male and a female dead fetus were successfully delivered (Fig. 3). Following delivery, the doe received two intrauterine cleaner furea boluses and three days of treatment with antibiotics and analgesics. A uterine cleanser was also given for one week. Eventually, the animal returned to normal. Post-operative treatment was employed with Inj. Enrofloxacin (Floxidin) 2 ml & Inj. Meloxicam (Melonex) 2 ml I/M were given. U-tone liquid was prescribed 30 ml twice a day for one week.

Discussion

Dystocia is defined as when a mother experiences active labor for more than an hour without giving birth to an offspring (Bowen, 1978) [4]. Caprine dystocia is frequently caused by incomplete cervical dilatation or ring womb (Majeed and Taha, 1989; Ghosh *et al*., 1992; Braun Jr., 2007) [13, 11, 5]. It was discovered that young animals at their first parturition were more likely to have the ring womb (Majeed and Taha, 1989) [13]. In this instance, the myometrium is exhausted due to a longer uterine contraction against an unyielding cervix, which prevents the cervix from dilating. Farm animals are typically given the corticosteroid dexamethasone to induce parturition. In this instance, Dexa and PGs produced better results and had an impact on the rate at which parturition was induced. The use of hormones in conjunction with dexamethasone may have an impact on the rate at which parturition is induced, according to Ott *et al*. (1980) [16] and Mc Dougall (1990) [14]. The hypothesis that prostaglandins are probably necessary for appropriate cervical ripening through a process that includes triggering the enzymatic breakdown of collagen is supported by the fact that prostaglandin therapy provided the best response (80%) (Cooke *et al*., 1975; Fitzpatrick, 1977; Arthur *et al*., 1982) [6, 9, 2]. Five more hours later, the first water bag appeared and spontaneously ruptured. Reevaluation by per-vaginal examination revealed a wet birth canal and a completely dilated cervix. The head and forelimbs of the fetus could be felt when it was placed anteriorly. By gripping both forelimbs and the head, the first fetus was delivered using modest manual traction. Another per-vaginal examination revealed the second fetus, which was also in an anterior presentation. The same gentle traction technique used for the first was used to deliver it. The fetuses, both male and female, were delivered dead. The vaginal tract was inspected to rule out any injuries following the removal of the fetuses.

Conclusion

In conclusion, the current study describes an effective non-surgical therapeutic care (using induction therapy) of caprine dystocia caused by ICD. Within four to six hours of starting treatment, the therapy was proven to be successful in reducing dystocia and delivering two dead fetuses.

Conflict of Interest

Not available.

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