

CLINICAL MANAGEMENT OF DYSTOCIA DUE TO INCOMPLETE CERVICAL DILATATION IN GOAT

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Abstract: The present case report was aimed to depict the successful clinical management of dystocia due to incomplete cervical dilatation or ringwomb in goat. A local non-descript doe in her first parity with full term pregnancy was presented to the Referral Veterinary Polyclinic, VGO, IVRI, Izatnagar, U.P with the history of delivery straining and slight vaginal discharge with intact water bag since last 5 hrs (i.e. 5 o'clock in the early morning). Animal was treated successfully with DNS, chlorphenaramine maleate, Epidosin, Dexamethasone and PGF2 α and fetuses were relieved by manual traction.

Keywords: Ringwomb, incomplete cervical dilatation, dystocia, DNS, Chlorphenaramine maleate, epidosin, PGF2 α .

Introduction

Ringwomb or incomplete dilatation of cervix is defined as failure of the cervix to dilate at parturition (Ghosh *et al.*, 1992). Ringwomb or incomplete dilatation of cervix causing dystocia is a commonly noticed problem in sheep and goats flocks. Dystocia may be either of maternal or fetal origin. In goat, out of all cases of dystocia the reported incidence ranged from 20 to 30% (Jackson, 1995; Noakes *et al.*, 2009). Maternal dystocia was mainly due to incomplete dilatation of the cervical canal followed by narrow pelvis and uterine inertia (Franklin, 1986; Majeed and Taha, 1989; Thomas, 1992; Noakes *et al.*, 2009; Purohit, 2006). Other less important causes are uterine torsion, monsters and simultaneous presentation of twins (Ali, 2011). Incomplete cervical dilatation was observed more frequently in young animals at first pregnancy than in older animals (Majeed and Taha, 1989; Edwards, 1952 and Edwards and Jones, 1957). The precise cause is still unknown. However, various predisposing or causative factors reported responsible for developing this condition are season, breed, first parturition, twinning, hormonal and mineral imbalances (Edwards, 1952;

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Edwards and Jones, 1957; Stubbings, 1971; Hindson and Turner, 1972; Wu *et al.*, 2004; Palliser *et al.*, 2006). The mortality rates of kids born to ringwombed does was reported as 29% (Majeed and Taha, 1989) vs. 31% (Ghosh *et al.*, 1992). Hormonal therapies, medical and manual dilatation have been used for the management of ringwomb syndrome with variable outcomes by several researchers (Majeed and Taha, 1989; Ghosh *et al.*, 1992; Das *et al.*, 2010; Ali, 2011). Caesarean section is a common method of treating ringwomb in order to save the fetal live when other methods have failed (Ghosh *et al.*, 1992). Ringwomb needs to be treated as early as possible, because the cervical ring starts to close down after 2 to 3 hours of partial opening in nonproductive labor (Majeed and Taha, 1989). The present paper reports the successful clinical management of dystocia due to incomplete cervical dilatation in goat.

Materials and Methods

A local non-descript doe in her first parity with full term pregnancy was presented to the Referral Veterinary Polyclinic, VGO, IVRI, Izatnagar, U.P with the history of delivery straining and slight vaginal discharge with intact water bag since last 5 hrs (i.e. 5 o'clock in the early morning). Physical examination showed udder enlargement and slight swelling of vulvar lips. Animal was dull, depressed and anorectic (Fig.1). Trans-rectal ultrasonographic examination revealed presence of two live fetuses in the uterus. Per vaginal examination revealed hardly two finger dilatation of cervix. The case was diagnosed as dystocia due to incomplete cervical dilatation.

Treatment

The animal was initially stabilized with fluid using DNS, Inj.5% DNS 500 ml I/V, pre delivery 7.5mg of chlorphenaramine maleate (antihistamine), 4ml of Epidosin (cervical dilator), 1ml of Dexamethasone (glucocorticoid) and 125mcg of PGF₂ α (leutolytic agents) were given intramuscularly and intravenously calcium scandoz 10 ml was administered slowly. After half an hour of the drug administration the water bag ruptured (Fig.2). Per-vaginal re-examination revealed fully dilated cervix with palpable fetal parts. Since there was less abdominal or uterine contractions after complete dilatation of cervix, fetus was relieved by manual traction. Two female live fetuses were delivered successfully (Fig.3). Post-delivery the doe was treated with antibiotic, analgesic, intrauterine cleanser cleanex bolus and oral calcium supplement for 3 days and the animal return to normal condition eventually.

Result and discussion

Dystocia is considered when the mothers have more than one hour of active labor without producing a newborn (Bowen, 1978). Alike with other reports, in the current case also dystocia occur in first parity of the doe. In the present case, prolonged uterine contraction against an unyielding cervix results in exhaustion of the myometrium leading to failure of the cervix dilatation. Failure of the cervical dilation may be credited to failure of secretion of the hormones that control labor or of the tissue response to hormonal secretions (Breeveld-Dwarkasing *et al.*, 2003; Wu *et al.*, 2004; Palliser *et al.*, 2006). Winkler *et al.*, (1999) indicated the collagen fibers in cervix have not fully undergone their normal changes during stage of parturition which might be responsible for developing incomplete cervical dilatation. Dexamethasone, a type of corticosteroid is normally used for induction of parturition in farm animals. Dexamethasone along with Prostaglandin showed a better result in this case. According to Ott *et al.* (1980) and Mc Dougall (1990) administration of hormone along with dexamethasone might affected the speed of induction of parturition. Several researchers also reported successfully use of PGF₂ α and prostaglandin analogue for treating the incomplete cervical dilatation. The best response was obtained (80%) with prostaglandin treatment, which is in accordance with the suggestion that prostaglandins are probably necessary for normal cervical ripening, acting by a mechanism involving activation of enzymic degradation of collagen (Cooke *et al.*, 1975; Fitzpatrick, 1977; Arthur *et al.*, 1982). In this present case, early diagnosis and timely treatment by using PGF₂ α might be responsible for successful delivery of live fetus. Similar finding was also reported by using PGF₂ α (Bosu *et al.*, 1979). Further, Silver (1992) and Romano *et al.*, (2011) disclosed the advantage of injection PGF₂ α without causing signs of respiratory distress in the kids.

Conclusion

A successful clinical management of dystocia due to incomplete cervical dilatation in goat has been reported.



Fig.1: Full term doe presented with swollen udder and depressed appearance



Fig.2: Appearance of water bag after drug administration



Fig. 3: Live fetuses delivered after manual traction

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