

Surgical management of dystocia due to incomplete cervical dilatation in a cow-a case study

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Abstract

A Jersey cross bred cow in its fourth parity, was presented with a history of dystocia. Clinical examination revealed incomplete cervical priming. Laparo-hysterotomy was performed under tranquilization, local analgesia and fetus was delivered. Adequate postoperative measures rewarded uneventful recovery.

Key words: Dystocia; Cervical dilatation; Laparohysterotomy; Jersey cross bred; cow.

Introduction

Cervical priming is the first stage of labor in large ruminants and is a gradual process of dilatation and softening of cervix (Jackson, 2004). Failure of cervix to dilate completely is a common cause of dystocia in large ruminants (Das and Choudhary, 2014). Incomplete cervical dilatation in multiparous cows may be associated with uterine inertia caused by hypocalcaemia (Noakes et al., 2002). Caesarean section is indicated if it does not respond to medical treatment with pituitrin and calcium borogluconate (Roberts, 1971). This paper communicates successful management of dystocia due to incomplete cervical dilation in a Jersey cross bred cow.

Clinical history and Observations

A pluriparous crossbred in its fourth parity was presented to the Department of Veterinary Surgery and Radiology, College of Veterinary Science, Proddatur, Andhra Pradesh with a history of dystocia for 36 hours and was said to have been unsuccessfully treated with calcium borogluconate, oxytocin and valethamate bromide. On clinical examination, the cow was in standing position and restless due to straining but no progress could be seen. The cow was at full term, as denoted by the growth of udder and relaxation of sacrosciatic ligaments. Vaginal examination revealed dilated cervix of 3 fingers width and intact fetal membranes. As the animal was straining since more than 36 hours it was decided to perform emergency caesarean section to save the life of fetus and dam.

Treatment and Discussion

The animal was rejuvenated with fluids by infusing three liters each of ringer's lactate and dextrose normal saline. After aseptic preparation of midventral abdominal area, tranquilization and local analgesia were achieved by using triflupromazine hydrochloride @ 0.1 mg/kg body weight and 2% lignocaine hydrochloride to the effect respectively. Gravid uterus was approached through left paramedian incision (Fig.1) and dead fetus was delivered by making incision over the least vascular area. Uterine incision was closed by Cushing sutures followed by lamberts pattern with chromic catgut no.1 (Fig:2). Abdominal wall was closed by standard procedures after thorough lavage of abdominal cavity with normal saline. Postoperatively animal was infused with 3 liters each of ringer's lactate and dextrose normal saline, 600 ml of metranidazole and 250 ml of calcium borogluconate i.v. for 3 days and administered ceftriaxone sodium 3g-, melonex- 15ml and chlorpheneramine maleate-10ml i.m. for 5 days with daily dressing of surgical wound with povidone iodine ointment. Skin sutures were removed after 13 days and cow recovered without any complications.



Fig 1. Left paramedian incision to approach gravid uterus



Fig 2. closure of uterine incision by double inversion pattern

In normal parturition, cervix dilates under the influence of a few hormones viz. oestrogens, corticosteroids, relaxin, oxytocin etc and failure of function of these hormones leads to incomplete cervical dilatation (Sane et al., 1994). Incomplete dilatation of the cervix is a common cause of dystocia in cattle (Noakes et al., 2002) and its incidence is about 55.8% (Singh et al., 1986) The bovine cervix being more muscular, fibrous and tightly closed during pregnancy than in other domestic animals may cause dystocia (Tillamann, 1960). Arthur (2001) suggested caesarean section in animals with improper cervical dilatation instead of waiting for several hours after calcium therapy in improper cervical dilatation. Vermunt (2008) mentioned that if the birth canal was fully dilated, fetal causes of dystocia might be amenable to relief by fetotomy, but failure of cervical dilatation and irreducible uterine torsion were absolute indications for surgery. Hence, it is concluded that laparohysterotomy is the last resort for incomplete cervical dilatation when the medical treatment fails.

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