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Management of dystocia due to prepartum vagino-cervical prolapse coupled with incomplete cervical dilatation in a Jersey crossbred cow

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Abstract

A case of dystocia due to prepartum Vagino-cervical prolapse coupled with incomplete cervical dilatation through cervicotomy in a Jersey crossbred cow is reported in this communication. An eight years old, full term pregnant Jersey crossbred cow in her fifth parity was presented to large animal obstetrics ward, Madras Veterinary College Teaching Hospital with the history of straining and difficulty in parturition for the last four hours with vagino-cervical prolapse. Detailed examination revealed vagino-cervical prolapse with presence of fetal parts and the dam couldn't deliver the fetus due to incomplete dilatation of cervix. Based on the examination, the case was diagnosed as dystocia due to prepartum vagino-cervical prolapse coupled with incomplete cervical dilatation. Then, a live female fetus was successfully delivered through cervicotomy and the dam had an uneventful recovery.

Keywords: cervicotomy, cow, incomplete dilatation of cervix, vagino-cervical prolapse

Introduction

Vagino-cervical prolapse is a major emergency reproductive condition in cows that commonly occurs in pluriparous animals with recurrence in subsequent gestations and adversely affects the reproductive performance of the animal. It is a non-hereditary complication, occurring in the last 2 to 3 months of gestation ^[1] called prepartum vagino-cervical prolapse or immediately after parturition and occasionally upto several hours later ^[2] called postpartum vagino-cervical prolapse. In initial stage, there is protrusion of the mucous membrane of vagina, more frequently the floor of vagina which lies just cranial to the urethral opening and in severe cases, there is protrusion of whole of the cervix and anterior vagina ^[3].

In cows, ischemia of cervix due to prepartum vagino-cervical prolapse may be responsible for imperfect cervical dilatation thus leading to dystocia and in such cases, cervicotomy is the simple procedure followed to alleviate the condition as compared to cesarean section ^[3]. The severity of condition varies with part of organ prolapsed, time elapsed, condition of the tissue involved and the clinical status of the cow. The present paper reports a case of dystocia due to prepartum Vagino-cervical Prolapse coupled with imperfect cervical dilatation in a Jersey crossbred cow and successful delivery of live fetus through cervicotomy.

Case history and Clinical observations

An eight years old, full term pregnant Jersey crossbred cow in her fifth parity was presented to Large Animal Obstetrics Outpatient ward, Madras Veterinary College Teaching Hospital, Chennai-600 007, India with the history of straining, difficulty in calving for the last four hours along with vagino-cervical prolapse (Fig. 1). The animal was on lateral recumbency and the clinical examination revealed that all the clinical parameters were within normal limits (rectal temperature of 102.2° F, pulse rate of 68/min and respiratory rate of 19/min). Detailed examination revealed vagino-cervical prolapse with palpable fetal parts and incomplete dilatation of cervix. The fetus was in anterior longitudinal presentation (P1); dorso-sacral position (P2); extended forelimbs and head (P3). Based on the examinations, the case was diagnosed as dystocia due to prepartum vagino-cervical prolapse coupled with incomplete cervical dilatation.

Treatment and Discussion

Under low caudal epidural anaesthesia with 2% Lignocaine hydrochloride, cervicotomy was performed around 10 cm length at 2 o'clock position using BP blade (Fig. 2). Consequently, a live female fetus was delivered successfully by simple traction through snares applied on forelimbs and long obstetrical eye hook (Fig. 3). The fetal membranes were removed and cervicorrhaphy was performed using continuous interlocking pattern with PGA size 2 suture material (Fig. 4). Later, urinary catheter was introduced to relieve urine and the prolapsed mass was cleaned with luke warm saline water and repositioned by adopting standard obstetrical procedure. Simple vulval retention suture was applied (Fig. 5) and the dam was administered with 250ml of Calcium borogluconate intravenously, 50 I.U. of Oxytocin followed by 4g of Amoxicillin+Clavulanate (Intamox), Meloxicam @ 0.2mg/kg BW, Chlorpheniramine maleate @ 0.5mg/kg BW intramuscularly for the next three days and the dam had an uneventful recovery.



Fig 1: Prepartum Vagino-cervical prolapse in a crossbred cow



Fig 2: Performing Cervicotomy for Imperfect Cervical Dilatation



Fig 3: Delivery of live female fetus by traction



Fig 4: Cervicorrhaphy using continuous interlocking pattern



Fig 5: Prolapsed mass repositioned and vulval retention suture applied

The predisposing factors responsible for genital prolapse are hormonal imbalance, higher oestrogen concentration in blood, hypocalcemia, excessive relaxation of ligaments, twin pregnancies, vaginal infection especially fungal and urinary tract infection, confinement for longer duration in slopy floor and increasing intra-abdominal pressure in last trimester of pregnancy [4]. Changes in circulating estrogen concentration during last trimester of pregnancy may lead to cervico-vaginal prolapse by increasing relaxation of sacro-sciatic ligament including other adjacent ligaments [5]. The excessive intra-abdominal pressure on relaxing pelvic parts during recumbent portions favours slow and continual prolapse of vagina initially followed by closed cervix and then part of gravid uterus [6]. It commonly occurs during last trimester of pregnancy particularly in pluriparous animal as compared to heifer [7].

Genital prolapse is an emergency condition which should be managed before excessive edema, mucosal trauma, fatal hemorrhage and contamination or else it can lead to septicemia, hence considered as life threatening [8, 9]. Hence, timely treatment is necessary to save the life of both dam and fetus. Cervicotomy is a simple and most effective method in

approaching a case of imperfect cervical dilatation in cows to alleviate in such conditions. Before handling of prolapsed mass, caudal epidural anaesthesia using 2% lignocaine hydrochloride is mandatory to provide satisfactory regional analgesia which prevents straining and also helps easy repositioning of protruding organs [3]. Cervico-vaginal prolapse can be successfully managed by using simple vulval retention suture or Buhner's suture technique may be used in case of recurrence and chronic case of prepartum vaginocervical prolapse. In the present report, the third-degree cervico-vaginal prolapse during parturition was managed by cervicotomy to deliver the fetus and vulval retention suture using umbilical tape as suture material which was found to be very satisfactory in preventing the recurrence of prolapse.

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