EPISIOTOMY TO RELIEVE DYSTOCIA DUE TO VULVAR STENOSIS AND PERSISTENT HYMEN IN A CROSSBRED COW HEIFER

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ABSTRACT

Per vaginal examination of a crossbred heifer presented for the treatment of dystocia revealed vulvar stenosis and persistent hymen. Episiotomy followed by excision of transverse band of persistent hymen lead to per vaginal delivery of fetus.

Keywords: Dystocia, Episiotomy, Heifer, Persistent hymen, Vulvar stenosis

INTRODUCTION

One of the maternal causes of dystocia comprises of constriction and obstruction of the birth canal followed by exhaustion of maternal expulsive forces (Srinivas *et al*., 2007). The stenosis of vulva is an unusual cause of obliteration of caudal portion of vagina, occasionally seen in the heifers or mares and less commonly in other animals (Jackson, 1995). Here, we report a case of dystocia in a crossbred heifer due to vulvar stenosis and persistent hymen, followed by delivery of fetus through episiotomy and excision of transverse band of persistent hymen.

CASE HISTORY AND OBSERVATIONS

A crossbred cow heifer with complete gestation was presented to the Teaching Veterinary Clinical Complex with the history that animal was treated by field veterinarian with prostaglandin $F_{2\alpha}$ ($PGF_{2\alpha}$) analogue for the induction of parturition. The feed and water intake was normal and there was no letdown of milk. The animal was apparently healthy with all vital parameters in the normal range. At vaginal examination, it was difficult to pass hand in the birth canal due to vulvar stenosis and the presence of transverse band of persistent hymen (Figure 1). However, the cervix was soft with three-finger dilatation. Per rectal examination revealed weak fremitus and fetus was positioned in pelvic cavity without any reflex.

TREATMENT AND DISCUSSION

At Teaching Veterinary Clinical Complex, first of all, the crossbred cow heifer was treated for the induction of parturition with $PGF_{2\alpha}$ analogue (cloprostenol Sodium, 500 µg, im), estradiol valerate (1 ml, im), calcium borogluconate (450 ml, iv) and dexamethasone (10 ml, im). After 24 h, the gynecological examination revealed a completely dilated cervix with dead fetus.

Therefore, it was decided to deliver the fetus after episiotomy and excision of transverse band of hymen. The operative site was prepared for aseptic surgery and epidural anesthesia was administered (5 ml 2% lignocaine HCl). After properly restraining the cow and under standard surgical procedure, an incision of 4" at 1 o'clock on right dorso-lateral side of vulva was made (Figure 2a). The transverse band of persistent hymen was excised aseptically with scissors (Figure 2). The adequate lubrication of birth canal with 2% sodium carboxy methylcellulose was carried out. Vaginal examination revealed a dead fetus in posterior longitudinal presentation. Obstetrical chains were applied on both the hind limb and fetus was delivered following mild traction (Figure 3). The vaginal mucosa and perineal muscles were sutured through simple continuous suture using catgut no. 3. Skin was sutured

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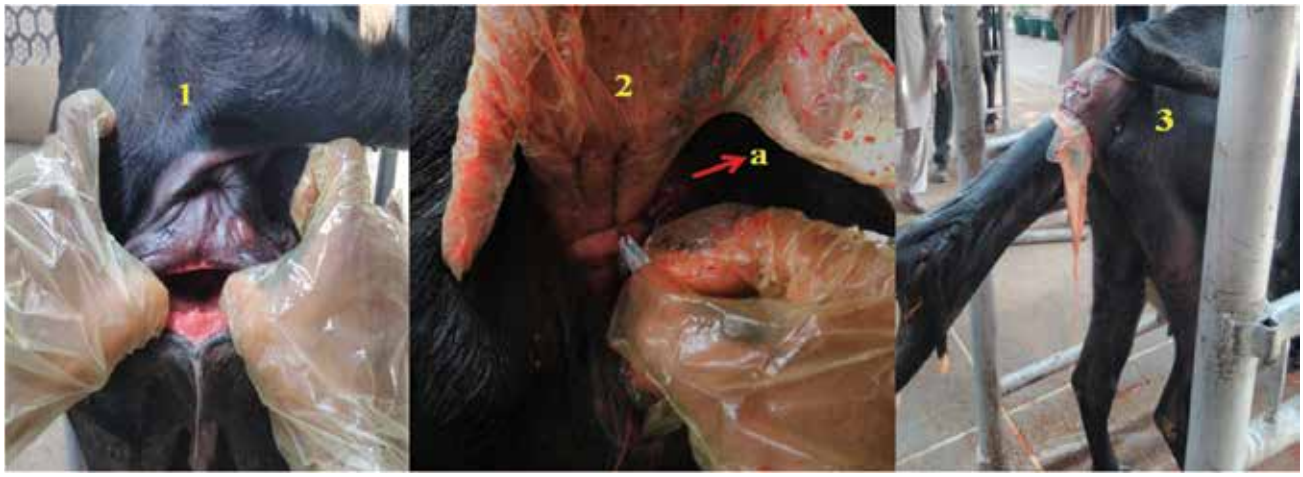

Figure 1: Vulvar stenosis, 2: Transverse band of persistent hymen and showing episiotomy incision wound (a), 3: Fetal delivery following episiotomy

using silk no. 3 through cross-mattress fashion. The placenta was delivered by 2 h after fetal delivery. Postoperative treatment for five days was given with Inj. Meloxicam @ 0.5 mg/kg im, Ceftriaxone + Tazobactum @ 3,375 mg im and Inj. Vitamin B-complex 10 ml im. Intrauterine treatment with Levofloxacin 100mg + Ornidazole 200mg + Vitamin E 25 mg/5 ml @ 60 ml intra-uterine was given for three days. Skin sutures were removed by day 14 post surgery and animal recovered uneventfully.

Vulvar stenosis and persistent hymen are developmental defects that may result in dystocia during first calving due to inadequate space for the delivery of fetus. In this defect of caudal reproductive tract, the animal is usually conceived, progresses through normal pregnancy but results in dystocia that can be resolved by episiotomy and incision of transverse band of hymen. Congenital stenosis of vulva resulting in dystocia and its successful management through episiotomy was also recorded in heifers (George *et al.,* 1997; Bhatt *et al*., 2012 and Kumar *et al*., 2014). In brief, episiotomy can be a treatment of choice in case of vulvar stenosis and persistent hymen leading to dystocia in crossbred cow heifer.

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