Dystocia in Conjunction with Uterine Prolapse in a Primiparous Holstein Friesian Cow


Department of Veterinary Gynecology and Obstetrics, College of Veterinary Science, Proddatur, Sri Venkateswara Veterinary University, Tirupathi (India)

1 Professor, 2 Assistant Professor 3 Teaching Assistant, 4 Assistant Professor, Teaching Veterinary Clinical Complex

*Corresponding author: jyothik100@gmail.com

Rec. Date: Jun 11, 2014 08:45
Accept Date: Jul 20, 2014 05:34
Published Online: July 25, 2014
DOI 10.5455/ijlr.20140720053416

Abstract

A primiparous Holstein Friesian (HF) cow was presented in the clinic with a complaint of dystocia. Pervaginal examination revealed lack of fetal reflexes with both fore limbs extended into birth canal and head deviated ventrally. Repulsion of fetus was done under epidural anaesthesia and ventrally deviated fetal head was corrected by keeping the animal in dorsal recumbancy. As attempts to deliver the fetus by traction failed, fetotomy was performed and fetal head removed to create space. Snares were applied to both fore limbs and while guiding the neck using hands, a large dead male calf was removed by forced traction. Uterine prolapse occurred instantaneously which was repositioned and treated accordingly.

Key words: Dystocia, Fetotomy, Forced traction, Uterine prolapse

Introduction

Dystocia is more common in cattle compared to all other species of farm animals with incidence more frequently observed in heifers than in multiparous cows (Johnson and Berger, 2003 and Mee, 2004). Feto maternal disproportion is a common cause of dystocia and that is highly species specific and breed related (Noakes et al 2009). Dystocia due to breast head posture in which head is flexed vertically between the fore limbs is rare in cattle. However the prolapse of uterus is a common complication of third stage of labour in the cow where complete inversion of gravid cornu occurs. The present paper deals with the successful correction of dystocia due to fetomaternal disproportion and abnormal fetal head posture, and treatment of subsequently occurred uterine prolapse.

Case History and Clinical Observations

Hosted@www.ijlr.org DOI 10.5455/ijlr.20140720053416
A three year old primiparous HF cow was presented in the Teaching Veterinary Clinical Complex with complaint of dystocia. History revealed initiation of colic symptoms and protrusion of both fore limbs without head since last 12 hours. Futile attempts were made by local veterinarian to relieve dystocia. Clinical examination revealed rectal temperature of 101°F and normal respiration rate and slightly increased pulse rate. Per vaginal examination revealed lack of fetal reflexes with both fore limbs extended into birth canal and head deviated ventrally. The case was diagnosed as dystocia due to fetomaternal disproportion and breast head posture of fetus.

**Treatment and Discussion**

Animal was restrained in lateral recumbency. The limbs were repelled into the abdominal cavity under epidural anaesthesia (2% Lignocaine HCL). The birth canal and uterus was lubricated with ample quantity of warm carboxy methyl cellulose solution. Then the animal was placed in dorsal recumbency and the breast head posture was corrected by cupping the mouth of fetus with hand so as to prevent any injury by incisors to uterus. Due to small pelvis and large, heavy fetus attempts to deliver the fetus by traction with dam in lateral decumbency could not succeed. Hence, in order to create space amputation of the fetal head was performed as per the procedure described in Roberts (1971) with the help of scalpel. Snares were applied to both fore limbs and while guiding the neck using hands, a large dead male calf was removed by forced traction (Fig 1). Immediately after delivery of calf the animal strained severely resulted in the eversion of the uterus (Fig 2). Again epidural anaesthesia was induced to facilitate the reduction of uterine prolapse. The prolapsed mass was washed free of dirt and debris with 0.1% potassium permanganate solution. The protruding mass after applying mild antiseptic cream was reduced by gentle pushing action with fisted hand while slowly elevating the mass from below simultaneously with the palm of other hand, thereby replacing the uterus to original position. The animal was administered 5% Dextrose saline, 3 liters i.v., inj. Calcium boro gluconate 500 ml, i.v., inj. Flunixine meglumine @ 1.2 mg/Kg body weight i.m., inj. Ceftriaxone sodium 3 G, i.m., inj. Chlorophenaramine maleate 50mg i.m., and inj. Oxytocin 10 IU i.m. Same treatment repeated next day and advised the owner to repeat the antibiotic and anti-inflammatory treatment for another 4 days. The animal had an uneventful recovery.
Fetomaternal disproportion occurs if the fetus is larger than normal or the pelvic canal is too small or of incorrect shape (Noakes et al 2009). The frequency of difficult calving was 15.2% in HF heifers and only 2.2% in Jersey heifers. High birth weight of HF calves could be one of the reasons for high frequency of difficult calving in this group (Nogalski and Mordas, 2012). There exists high correlation between pelvic diameters and calving ease in Holstein Friesian, in comparison with other breeds, Friesian cattle has smallest pelvic area at first calving (Ramin et al. 1995).

**Fig 1:** A large dead male calf with head removed by fetotomy

**Fig 2:** Prolapse of uterus soon after delivery

Downward displacement of the head is an uncommon type of dystocia in cattle (Noakes et al 2009). It is usually caused when traction is applied on the limbs before the head had extended or application of traction on vertex posture without correction, in which calf’s nose abuts on the pelvic brim. Severe downward displacement of the fetal head in the present case might be due to futile attempts by local people. Decapitation or amputation of the protruding head is indicated when the fetus is usually dead and amputation of its head allows the fetus to be repelled, so that the abnormal posture of the fore limbs may readily be corrected by mutation without the interference of the head. Partial embryotomy is most commonly performed and fetotomy in large animals is a practical and successful way of relieving dystocia (Roberts, 1971).

Forced extraction of the calf and dystocia has been incriminated as cause of uterine prolapse in dairy cattle (Hopper, 2007). Uterine prolapse is nonhereditary and mostly associated with hypocalcaemia and forceful fetal extraction (Anonymous, 2006). Postoperative oxytocin treatment in uterine prolapse, is considered helpful in restoring uterine tone and subsequent
prevention of recurrence of prolapse. Intravenous use of calcium boro gluconate helps to correct the hypocalcaemia occurring simultaneously in the majority of prolapsed cows (Richardson et al 1981) and prevention of dystocia due to feto maternal disproportion in cattle can be achieved by careful selection and management of the cattle (Noakes et al 2009).

Fetomaternal disproportion is a common cause of dystocia in cattle and if it is in association with fetal malpresentation, partial fetotomy and forced traction will help to relieve dystocia. However it may lead to uterine prolapse which can be treated successfully.

References

1. Anonymous 2006. Problems of Bovine Pregnancy. Louisiana State University, School of Veterinary Medicine, Skip Bertman Drive, Baton Rouge, LA 70803, pp. 303-305, 400-401.