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Surgical management of dystocia due to ring womb condition in black Bengal doe: A case report

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Abstract

Dystocia is defined as difficulty in birth caused by many factors in animals. In small ruminants, it is a very common condition especially in goats. A three year old Black Bengal doe was presented to Veterinary Clinical Complex, WBUAFS, Belgachia, Kolkata, with the history of full term pregnancy and distention of the lower abdomen. The animal was showing straining continuously for the past one day without progressing into parturition. Preliminary examinations followed by per vaginal examination identified that the cervix is not dilated and needs caesarian section. The doe was sedated by giving intra muscular injection of xylazine. Local infiltration of 2% lignocaine hydrochloride gave at the site of incision. Left ventral abdominal coeliotomy was done. On the body of the uterus incision was made and removed the dead fetus from the uterus. The uterus was sutured, followed by suturing of the peritoneum, muscle layers, and skin. Animals recovered from anesthesia without any complication. Postoperative treatment was done with antibiotics for seven days. Animals recovered after the course of antibiotics along with other supportive therapy.

Keywords: Dystocia, Ring womb, caesarian section, goat

1. Introduction

Triplet kidding was found to be highest in first generation followed by third and second generation (Jha *et al.*, 2019) ^[1] which may be one of reason of dystocia in doe. Difficulty in giving birth of new antenatal individual is known as dystocia and causes can be either expulsive force, inadequate size of birth canal (e.g. ring womb) and fetal size and disposition (Arthur *et al.*, 1982) ^[2]. Mainly dystocia can be divided into two types, one is fetal cause and another is maternal cause. Dystocia due to fetal cause includes abnormal presentation, position and posture and congenital defect (Pugh *et al.*, 2012) ^[3]. Dystocia due to maternal cause comprises of incomplete dilatation of the cervical canal, tapered pelvis and uterine inertia (Franklin, 1986) ^[4]. Partial or incomplete dilatation of the cervix, also known as ring womb, is a common cause of dystocia in doe (Lyngset, 1970) ^[5]. Incidence of dystocia is more common in small ruminants especially in does as compare to ewes (Sharma *et al.*, 1999) ^[6]. Safe method for delivering of kid with high successful rate has been reported was caesarian section (Engum and Lyngset, 1970; Smith, 1980) ^[7, 8]. Although hormonal medicine treatment and manual traction can be attempt but successful rate is very less (Naoman *et al.*, 2013) ^[9].

2. History and diagnosis

A three years old black Bengal doe was presented in veterinary clinics, Belgachia with full term pregnancy and distention of abdomen. There was a history of delivery straining and slight discharge from vagina with intact water bag. Physical examination revealed enlargement of udder and slight swelling of vulvar lips. Animal was found dull and depress. Per vaginal examination was performed and dilatation of cervix recorded was hardly two fingers. The case was diagnosed as dystocia due to incomplete dilatation of cervix (ring womb).

3. Treatment

Animal was prepared for emergency surgical management to relieve this condition.

3.1 Anaesthetic protocol

The doe was sedated with xylazine hydrochloride intra muscularly at the dose rate of 0.2 mg/kg body weight. Induction time needed around 7 minutes. Local infiltration of anesthesia on the left flank using Lignocaine hydrochloride 2% was given.

3.2 Surgical Technique

Doe was placed on the surgical table at lateral recumbency. By scrubbing with povidone iodine, lateral abdomen was prepared for aseptic surgery. An oblique skin incision was made on left flank midway between the last rib and iliac crest extending from 4 inches below the lumbar vertebrae to 1 inch above the milk vein. Skin was flipped and the fascia was separated by hand manipulation. Abdominal muscles bundle was separated and peritoneum was exposed. The layer of parietal peritoneum was raised and a stab incision was made by bard parker blade and it was extended along the incision line with scissors. Uterus was identified and an incision was made in the uterine body and removed the dead fetus (Fig 2). Gauge packing was done around the uterus so that uterine content doesn't go to the abdomen and uterus washed with sterile normal saline and metronidazole solution. The uterus was closed by 2-0 catgut using a double layer of inversion sutures – Cushing followed by Lambert suture (Fig 1). Peritoneum and muscle layers were sutured using simple interrupted suture pattern by 1-0 vicryl. The subcutaneous tissue also was closed by 1-0 vicryl using continuous pattern. The skin layer was closed by nylon suture (Linex no.1-0) using horizontal mattress suture (Kumar *et al.*, 2020) [10]. Post operative treatment was given Dycristicin-S® @2 ml intramuscularly daily for 5 days and Meloxicam 1 ml intramuscularly for 3 days. Post operative dressing were done on every alternate day for 5 days. Tetanus toxoid injection was also given. Animal was recovered without any complications.



Fig 1: Suturing of uterus after fetus removal.



Fig 2: Dead fetus

4. Conclusion

A successful surgical management of dystocia due to incomplete dilatation of cervix i.e. Ring womb condition in Black Bengal goat has been reported.

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