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M Bhuyan

Department of ARGO, College of Veterinary Science, AAU, Khanapara, Guwahati, Assam, India

I Gayari

JRF, DBT Twinning Project, Department of ARGO, College of Veterinary Science, AAU, Khanapara, Guwahati, Assam, India

M Baruti

Department of ARGO, College of Veterinary Science, AAU, Khanapara, Guwahati, Assam, India

R Deka

Department of ARGO, College of Veterinary Science, AAU, Khanapara, Guwahati, Assam, India

Corresponding Author:

I Gayari

JRF, DBT Twinning Project, Department of ARGO, College of Veterinary Science, AAU, Khanapara, Guwahati, Assam, India

Caesarian section in a dairy cow due to feto-pelvic incompatibility: A case report

M Bhuyan, I Gayari, M Baruti and R Deka

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Abstract

A four years old Crossbred cow was presented in Teaching Veterinary Clinical Complex (TVCC) showing the signs of continuous straining. An attempt to deliver the fetus by manual handling was performed in field but only the fore limbs of the fetus could be retracted from the birth canal. Upon failing to deliver the fetus, the case was referred to TVCC, Khanapara. A thorough examination revealed the condition was also associated with feto-pelvic disproportion leading to inability to deliver the fetus. The case was subjected for immediate Cesarean Section. The animal showed progressive signs of recovery on 7th day onwards with normal body temperature, appetite, stool and urine.

Keywords: Dairy cow, feto-pelvic incompatibility, caesarian section

Introduction

Dystocia can be defined as delayed or difficult calving, sometimes requiring significant human assistance [1,9]. It has a considerable impact on production and future reproduction of dairy cow [7]. Studies on cattle indicate that the fetus is the major cause of dystocia [4, 6, 7, 8] and abnormal fetus presentations at birth contribute to 1-5% of total dystocia cases.[4,8] Broadly speaking, the fetal origins of dystocia in cattle can be divided into those caused by excessive size of the fetus relative to the maternal pelvis (feto-pelvic disproportion) and those caused by abnormalities of the fetus (fetal monsters, fetal diseases and fetal mal-disposition) [6]. The most common cause of dystocia in cattle is feto-pelvic disproportion.[6, 10] This is most common in heifers when the fetus is of larger in size for its breed and the maternal pelvis is not big enough, or the fetus is unusually large and cannot be delivered through a pelvic canal of normal size. Mating between various breeds of cows may result in an increased incidence of dystocia due to feto-pelvic disproportion. Thus, cesarean sections required for delivering the fetus in those cows. Fetus of large size cannot be normally delivered and the decision of fetotomy or cesarean section would generally depend on the condition of the fetus and/or the dam. Oversized fetuses in a narrow birth canal must be removed by cesarean section. An attempt can be made to remove dead oversized fetuses in a relaxed birth canal through fetotomy but if this fails, caesarean section is the last resort [2].

Materials and Methods

A four years old Crossbred Cow was presented in Teaching Veterinary Clinical Complex (TVCC) showing the signs of dystocia. The owner has reported that the cow was at the last stage of pregnancy and has been straining since last twenty-four hours. An attempt to deliver the fetus by manual handling was performed by a local Veterinary field assistant but only the fore limbs of the fetus could be retracted from the birth canal. Upon failing to deliver the fetus, the case was referred to TVCC, Khanapara. A thorough examination was done and on per rectal and per vaginal and it was confirmed with a large sized dead emphysematous fetus. The condition was also associated with feto-pelvic disproportion leading to inability to deliver the fetus. Upon thorough examination of the birth canal, it was found to be too narrower for performing fetotomy and subjected for immediate Cesarean Section.

Results and Discussion

The cow was administered epidural anesthesia with 2% lignocaine (LOX®, Neon Labs, India) at the dose rate of 1ml for 100 kg body weight at 1st inter coccygeal space to prevent straining and numbness of pelvic sensation.[3, 5] As soon as anesthetic took its action the cow casted on right lateral recumbency and site was prepared aseptically.

Inverted 'L' block with linear infiltration of lignocaine administered subcutaneously. An oblique incision was made on the lower caudal flank region incising all the muscle layers and peritoneum carefully. The exposed gravid horn demobilized by drape cloth and an incision was made on the gravid horn to remove the dead fetus (Fig1 &2). A large sized dead emphysematous fetus and the placenta was taken out carefully without peripheral damage to adjacent tissue (Fig. 3). The uterine incision was closed by inversion suture method with polydioxone absorbable sutures (Fig.4). The

peritoneum and muscle layers sutured separately by simple continuous method with absorbable polydioxone size 2. The skin layer was sutured with mattress suture by non-absorbable Silk size 2 Post operatively Flunixin Meglumine @ 2.2 mg/kg IV, Cefiofur 2.0 mg/Kg IM, Avilin 10 ml IM, Serrakind bolus 2 boli twice daily was given for 5 days and the suture material was removed after 10 days. The animal showed progressive signs of recovery on 7th day onwards (Fig.5) with normal body temperature, appetite, stool and urine.



Fig 1-2: Extraction of Fetus



Fig 3: Dead Emphysematous Fetus



Fig 5: Recovery stage after 8th days



Fig 4: Rose pink healthy uterus

Conclusion

Cases of Dystocia in Cattle are very common both in field and farm conditions. Most of the cases of Dystocia in cattle are often seen due to feto-pelvic disproportion, those caused by excessive fetal size relative to the maternal pelvis. In this regard the farmers are needed to be made aware of not to incorporate Artificial Insemination using semen of exotic bull of higher body weight compared to the heifer or the cow on 1st parity.

Moreover, in treatment point of view such case can be corrected by using Fetotomy, however this approach can only be used when the opening of the birth canal is large enough for performing fetotomy or else Cesarean section is advised.

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