



ISSN (E): 2277- 7695

ISSN (P): 2349-8242

NAAS Rating: 5.03

TPI 2019; 8(9): 234-236

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www.thepharmajournal.com

Received: 07-07-2019

Accepted: 09-08-2019

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The incidence of dystocia and its management: Retrospective study

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Abstract

The study aimed to record the incidence, relieve and outcome of dystocia in cattle by either conservative treatment or caesarean section. A Total of 10 clinical cases of dystocia in cattle were screened in Veterinary College Hospital, Hassan for a period of six months from January 2019 to June 2019. Present study revealed the incidence of foetal cause of dystocia (60%) to be more common than maternal cause of dystocia (40%). Incomplete cervical dilatation (33%) was the most common maternal cause of dystocia followed by pre cervical torsion (10%). Lateral deviation of neck (30%) was the commonest foetal cause of dystocia followed by bilateral hock flexion (20%) and Anasarca (10%). The cases were resolved either by manual traction or by caesarean section and those attended in time resulted in an increased foetal survival rate (60%).

Keywords: Dystocia, foetal, maternal

Introduction

As dystocia causes severe economic losses to the dairy farmer and dairy owners, it is considered to be one of the most important obstetrical conditions and requires immediate veterinary attention and could be defined as delayed or difficult birth^[8]. Dystocia occurs when there is failure in one or more of the three main components of calving –expulsive forces, birth canal adequacy and foetal size and position^[4]. The occurrence of dystocia appears to be highest in cattle and buffalo in comparison to other domestic animals^[3]. Despite there being an awareness of problem of dystocia for such a long time, it still causes significant economic losses to both large and small livestock animals. Heifers suffer from it more (2.5 times) frequently than cows. Smaller breeds like non-descript and Jersey cows and those male foetus suffer more^[4]. Buffaloes appear to have lower incidence of dystocia in comparison to cattle probably due to anatomical differences between cattle and buffalo pelvic cavity and bones, fifth sacral vertebra, vaginal canal and vulvar lips^[6]. Fetal cause of dystocia was very common compared to maternal cause and was observed to be more common with the delivery of male calf than the female calf^[7]. Different obstetric methods including Caesarean section and foetotomy are advocated for relieving dystocia in cattle. Currently caesarean is one of the most common surgical procedures performed by veterinarians in cattle. It has high maternal and foetal survival rates and is less exhausting, speedy and safer than foetotomy.

Materials and Methods

The present study comprised of clinical cases presented to Veterinary College Hospital, Hassan, conducted from January 2019 to June 2019 to identify the incidence and major causes of dystocia. Aspects recorded were: animal species, etiology of dystocia, method adopted to relieve dystocia and outcome and subsequent complications during follow up period were recorded. Different approaches were used to resolve dystocia cases, which were adjusted to each situation following observation of major clinical signs and after evaluation of cow.

Criteria to choose procedure to correct dystocia

If the calf is in anterior presentation and complete dilatation of cervix occurs, then delivery per vaginum considered to be possible: conservative treatment involving medicinal treatment and or manual/ forced traction were employed. If the calf is in posterior presentation/ incomplete cervical dilatation/ foetal emphysema, which is difficult to deliver manually, caesarean section or foetotomy were preferred. Caesarean section was performed under xylazine sedation and local linear infiltration with 2% Lignocaine via ventro-lateral oblique incision and epidural.

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Results and Discussion

In the present study, incidence of Maternal and Foetal Dystocia were 40% and 60% respectively (Table 1). Dystocia is usually considered to be either of maternal or foetal in origin, and on the basis of this classification, in the present study, 50% of foetal cause of dystocia is due to lateral deviation of neck, this is in agreement with Arthur [1] who reported that dystocia in Bovines due to lateral deviation of head and neck constitutes one of the common types of

ruminant dystocia. However, foetal survival rate is 60% includes both caesarean and manual traction (Table 3).

Table 1: Incidence of Maternal and Foetal Dystocia in cattle

Type of Dystocia	No. of Cases	Incidence (%)
Maternal	04	40
Foetal	06	60
Total	10	100

Table 2: Maternal and Foetal Cause of Dystocia

Sl. No.	Type of Dystocia	No. of cases	Percentage
Maternal cause of Dystocia			
01	Incomplete Cervical Dilatation	03	33%
02	Pre Cervical torsion	01	10%
Foetal cause of Dystocia			
04	Anasarca	01	10%
05	Bilateral hock flexion	02	20%
06	Lateral Deviation of Neck	03	30%

Table 3: Foetal survivability using different treatment procedures adopted to relieve dystocia

Sl. No.	Procedure adopted	Foetal survival Rate (%)
01	Manual Traction (n =5)	3 /10 (30%)
02	Cessarean Section (n =5)	3 /10 (30%)
	Total	6/10 (60%)



Fig 1: Caessarian section-Infiltration



Fig 2: Flushing of uterus with Normal saline of Local Anaesthesia



Fig 3: Incision of Uterus



Fig 4: Releiving of Foetus



Fig 5: Aborted Foetus



Fig 6: suturing of uterus

Suturing of uterus

In the Present study, Maternal dystocia is mainly due to incomplete dilatation of cervix (Table 2). This is in agreement with Praveen ^[5] who stated that incomplete dilatation of cervix is one of the major cause of maternal dystocia. To ensure dilatation of cervix, Inj. Oxytocin of 40 I.U was given Intravenously and administration of calcium borogluconate of around 450 ml was infused. This is in agreement with Noakes who reported that the incomplete dilatation in multiparous cows may be associated with uterine inertia caused by hypocalcemia. This findings were similar to Das ^[2], who indicated that injections of oxytocin and calcium borogluconate might improve tonicity of uterus and aid or hasten the cervical dilatation.

Conclusion

From the present study, it can be concluded that the incidence of foetal dystocia is more common than maternal dystocia and the percentage of survivability of foetus is same in both Manual traction and Cessarean section.

Ethical Matters

In the present study, the Cases were presented to Veterinary Hospital, Hassan indicating no ethical issue related in this study.

Acknowledgement

The authors acknowledge the Dean, Veterinary College, Hassan, and Karnataka for the support for this study.

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