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Dystocia in Small Ruminants – A Retrospective Analysis

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Abstract

A brief retrospective study of seventy small ruminants with history of dystocia was evaluated over a period of 10 months. The clinical cases of dystocia were categorized into fetal (n=44) and maternal causes (n=26). Fetal causes include faulty disposition (n=35) and oversized fetus (n=9) while, maternal causes include incomplete cervical dilatation (n=16) and uterine torsion (n=10). Sixty animals were relieved from dystocia by gentle traction and the rest 10 animals were subjected to caesarean section by lower left flank laparohysterotomy. In our study, it was observed that the major cause of dystocia due to fetal and maternal origin were faulty disposition (79.54%) and incomplete cervical dilatation (61.53%), respectively

Key words: Dystocia, Cervical dilatation, Fetus, Caesarean section

One of the most important factors affecting the reproductive performance of small ruminants is dystocia (Abdul-Rahman *et al*., 1999). Although, dystocia is considered to be a common condition in small ruminants (sheep and goat), it may result in huge economic losses to farmers due to death of new born or dam and adversely affects dam fertility in terms of (uterine infections,retained placenta, and longer

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Fig 1: Dystocia relieved by traction

Fig 2: Dystocia relieved by Caesarean

lambing and kidding intervals (Mcsporran, 1980, Rook *et al*., 1990, Ghosh *et al*., 1992, Brountset *al*., 2004, and Scott, 2005). Maternal causes of dystocia include mainly incomplete cervical dilatation (ringwomb), narrow pelvis, and uterine inertia (Majeed and Taha 1989, Noakes *et al*., 2009). The incidence of dystocia is generallyinfluenced by factors such as breed of sire and dam, number of foetus, age and body weight of dam (Hanie, 2006). Successful management of dystocia depends upon proper diagnosis of the causes of dystocia (Aziz and Taha, 1996) and use of correct management techniques like manual correction and traction, foetotomy, hormonal treatment and caesarean section. The current study was aimed at retrospective analysis of various causes of dystocia and its management in small ruminants.

Materials and Methods

The study was conducted on 70 sheep and goats (Non-descript) which were presented to Veterinary Clinical Complex, Veterinary College, Garividi from February to December, 2022 and data related to causes and management of dystocia were recorded. For the management of dystocia, mutational operation like forced traction (fig 1) was employed on fetus as per Noakes *et al*. (2009) while, caesarean section (fig 2) was performed as per Roberts (1971). Incomplete cervical dilatation was treated with Epidosin (Valethamate bromide, 4ml) intramuscularly, DNS (500ml) intravenously. During mutational operations, lubrication of birth canal was done using liquid paraffin and fetuses were removed by gentle traction. Post operatively, intrauterine bolus containing nitrofurazone, urea and metronidazole were placed and followed by supportive treatment with antibiotics and analgesics for 5 days.

Results and Discussion

In the present study, most causes of dystocia were categorized to fetal (62.85%) and maternal causes (37.14%) which were in agreement to the findings of Bhattacharya *et al.*(2015) of which, fetal factors include faulty disposition (79.54) and oversized fetus (20.45%) while, maternal-factors include incomplete cervical dilatation (61.53%) and uterine torsion (38.46%), (Table I). In the present study, dystocia in sixty animals (85.71%) were relieved by following standard procedures (Jackson, 2004) of correction of faulty disposition (mainly postural defects) and gentle traction. While, caesarean section was performed only in 14.28% of cases of dystocia due to fetal oversize with live fetus and uterine torsion (Table II).The success rate of caesarean section was 100% and in agreement with the findings of Aziz and Taha (1996). In the current study, successful medical management of dystocia due to failure of cervical dilatation or ring womb was achieved by treating animals with inj. valethamate bromide and fluid therapy. Failure of cervix to dilate in sheep and goats had been suggested to be due to hypocalcaemia, hypophosphatemia, mineral imbalance and or / ingestion of estrogen by pregnant animals, present in

Table I : Causes of dystocia in sheep and goat

Sl. no	Cause of dystocia	No. of cases reported	Percentage (%)
1	Incomplete cervical dilatation	16/26	61.53
	Uterine torsion	10/26	38.46
	Incidence of Maternal causes	**26/70**	**37.14**
2	Mal disposition	35/44	79.54
	Oversized fetus	9/44	20.45
	Incidence of fetal causes	**44/70**	**62.85**

fungi or clover (Al-Sultan and Majeed, 1996; Braun, 1997). In addition, faulty disposition of fetus was corrected upon proper lubrication of birth canal and moderate traction. Further, it was concluded from the present study that fetal mal-disposition and incomplete cervical dilatation are the major causes of dystocia in small ruminants which was similar to the reports of Thomas (1990) and Jackson (2004) in sheep and Rahim and Arthur (1982) and Purohit *et al.*(2006) in goats. In addition, it is concluded that proper breeding and nutritional management of small ruminants can reduce the occurrence of maternal cause of dystocia.

Conclusion

The current study suggested that fetal mal-disposition and incomplete cervical dilatation are the major causes of dystocia. It is observed that Caesarean section is an effective method of resolving dystocia in small ruminants with 100% success rate.

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Table II: Treatment regimens adopted to relieve dystocia in sheep and goat

Sl. no	Treatment adopted	No. of cases attended	Percentage (%)
1.	Traction	60/70	85.71
2.	Caesarean section	10/70	14.28

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