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CAESARIAN SECTION IN BOVINES—AN ANALYSIS OF 36 CLINICAL CASES

M. R. K. Iyer[1], T. P. Reghuprasad[2] and Mathew Jacob[3]

Department of Animal Husbandry, Trivandrum

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Thirty six cases of caesarian section performed in bovines under field conditions and details like cause of dystocia, comparative advantages and disadvantages of various operative sites, maternal recovery rate in relation to duration of dystocia, age and number of calvings of the dam at which caesarian was done and breedwise distribution of cases were analysed and findings placed on record.

Materials and Methods

Thirty six cases of caesarian section performed during the period from August 1975 to August 1983 forms the material for the report. The site chosen are shown in Table I. All the operations were performed with the animals secured in lateral recumbancy.

Anaesthesia and control:

100 mg of Triflupromazine Hydrochloride (Siquil–Sarabhai) was administered intramuscularly twenty minutes prior to the operation. Linear local infiltration of 40 to 60 ml of 2% Lignocaine hydrochloride was done at the site of incision.

Technique:

A large area adjoining the site was prepared. After thorough cleaning and sterilisation of the site the abdominal cavity was entered through an appropriate incision. With incision on the left side, the rumen was pushed anteriorly, and packed with sterile towels soaked in physiological saline. The uterus was lifted, brought to the incision and incised between rows of cotyledons. In one case where ruminal adhesions were encountered, a second laparotomy was performed on the right flank. In case where torsion could be corrected after laparotomy delivery was

Present Address:

[1] Superintendent, District Livestock Farm, Kodappanakkunnu.

[2] Assistant Director, Disease Free Zone, Nedumangad.

[3] Veterinary Surgeon, Intensive Cattle Development Project, Trivandrum.

effected per vagina. After removing the calf the foetal membranes were removed if detachable. Furea bolus (Eskay lab) or Oxytetracycline tablets 5 g (Terramycin A. F. Tablets—Pfizer) were deposited inside uterus. The incision on uterus was sutured with Lembert's sutures using No. II Chromic Catgut. Strepto penicillin was sprinkled in the abdominal cavity. The laparotomy wound was sutured with two layers of continuous sutures on the muscles and horizontal mattress sutures on the skin.

Post operative care:

Oxytetracycline 1000 mg was administered intramuscularly for three to five days post operative. In addition intravenous infusion of 5% or 10% dextrose solution (1000 ml to 1500 ml) was done daily once for two days. The skin sutures were removed between the tenth and twelth post operative day.

Results

Out of thirty-six cases of cows and buffaloes operated only five animals died. The causes of dystocia is listed in Table II. The maternal recovery rate in relation to duration of dystocia is presented in Table III. The age and number of calvings at which caesarian was done and breed-wise distribution and sex of the foetus are illustrated in Tables IV and V. Shock, metritis with or without peritonitis, toxaemia and shock were the cause of mortality of the dam. The authors have not come across a case where the placenta was expelled of its own within 6 to 8 hours post operativey. On examination it was found that involution of uterus occurs within 25 to 30 days after caesarian section. Animals have come into first heat between 60 to 75 days after the operation. On subsequent follow up six animals have conceived and calved, eventhough elaborate observations have to be made before coming to a firm conclusion. It is also seen that cross bred animals do lactate well and remain for normal period.

Discussion

It is observed that dystocia cases are referred to the Veterinarian only as a last resort. In practice more animals survive when manual handling to relieve the dystocia is limited. The high rate of success achieved by the authors is purely due to the factor mentioned above. As reflected in Table IV, the majority of the animals requiring caesarian section were first and second calvers. The common cause of dystocia was torsion of uterus (52.8%) and undilated cervix being next in order in the present study. Arthur *et al.* (1951) has opined that uterine torsion as the common cause of maternal dystocia in bovines.

Table I

Sl. No.	Site	Number of animals	
		Cows	Buffaloes
1.	Vertical incision on the left paralumbar fossa (I)	18	5
2.	Vertical incision on the right paralumbar fossa	1	1
3.	Oblique incision downward and forward from a little below the left external angle of ileum	7	2
4.	Paramedian incision between the mammary vein and midline on the left side and anterior to the udder	1	1
	Total	27	9

(I) Ruminal adhesions were encountered while performing laparotomy on the left flank site and hence laparotomy was again performed on the right flank region followed by caesarotomy.

Table II

Causes of dystocia

Sl. No.	Condition causing dystocia	Number of animals			Calf live or dead
		Cows	Buffaloes	Total	
1.	Torsion (I)	14	5	19	All except one calf were dead
2.	Undilated cervix (Ring womb)	5	1	6	One cow and buffalo calf each were alive
3.	Uterine rupture due to ankylosed foetal legs	3	2	5	All calves were dead
4.	Breach presentation	2	—	2	One calf alive and other dead
5.	Oversized foetus	2	—	2	Calves dead
6.	Complete lateral deviation of head and neck and unilateral shoulder flexion	1	1	2	Calves dead
	Total	27	9	36	

(I) Both anticlockwise and clockwise torsion was observed.

Table III

Maternal recovery rate in relation to duration of dystocia in cows and buffaloes

Duration of dystocia	Number of animals		Total	Animals died	Percentage of survival
	Cows	Buffaloes			
Upto twelve hours	19	3	22	1	95.2%
Upto twenty four hours	5	3	8	2	66.7%
Upto thirty six hours	3	3	6	2	50.0%
Total	27	9	36	5	

Table IV

Age of the animal and number of calving at which caesarian was done.

	Age of the dam		Number of the calving			
	2 to 5 years	5 to 8 years	1st	2nd	3rd	4th
Cattle	18	9	8	10	5	4
Buffalo	6	3	3	5	1	—
Total	24	12	11	15	6	4

Table V

Breedwise distribution of cases and sex of the foetus.

Breed	Number of animals	Sex of the foetus	
		Male	Female
Sindhi	1	—	1
Jersey cross	20	9	11
Brown Swiss cross	5	3	2
Holstein cross	1	1	—
Murrah cross	5	2	3
Surthi cross	3	2	1
Non descript	1	—	1
Total	36	17	19

As reported by Krishnamurthy *et al.* (1968) local infiltration of 2% Lignocaine hydrochloride solution in combination with tranquilisers provided adequate anaesthesia for caesarian section and the authors are in agreement to this finding. It is preferable to remove the detached placenta to prevent metritis and to use some intrauterine pessaries to control infection. To prevent surgical stress and loss of fluids, intravenous infusion of fluid was found necessary.

About operative sites various views were expressed by Benesch and Wright (1962). In actual practice the oblique flank incision placed downward and forward below the left external angle of ileum was considered as most suitable followed by incision on the left paralumbar fossa. The advantages with these sites were non interference of intestines, non herniation, liberty to extend the incision and non injury to any major blood vessels. Tympany which rarely occurs during caesarian section can easily be relieved in this position. Whereas when paramedian incision was made large sized udder hampered the operative process and suturing, there were chances for herniation and easy contamination of the operative wound. The right flank site was found to be unsuitable because of the difficulty in controlling the festooning intestines. Stress due to caesarian section does not appear to have any impact on the prognosis of the case. It is observed that breed specificity has no relevance on dystocia and caesarian section has no bearing on post operative conception.

Summary

An analysis of 36 cases of caesarian section in bovines was recorded. Torsion was the most common cause of dystocia. A left flank incision placed obliquely downward and forward below the externel angle of ileum was found the most suitable. Survival rate of ruminants decreased with the increase in duration of dystocia. Young animals were seen more affected but breed of dam or sex of the foetus had no influence on dystocia.

സംഗ്രഹം

പശുക്കളിൽ സിസേറിയൻ ഓപ്പറേഷനെ പറ്റി പഠനം നടത്തി. ടോർഷൻ ആയിരുന്നു സിസേറിയൻ ഓപ്പറേഷൻ ചെയ്യുവാനുള്ള പ്രധാന കാരണം. ചെറുപ്രായ പശുക്കളിൽ ആയിരുന്നു ഡിസ്റ്റോക്കിയ കൂടുതൽ. ഓപ്പറേഷൻ ചെയ്ത വിധവും വിവരിച്ചിരിക്കുന്നു.

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