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Skyrocketing Caesarean births in Kerala Fighting the trend

Gynaecology

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ABSTRACT

Background :
Cesarean section rates at an alarming rise in India. According to WHO, there is no justification to have more than 10-15% CS. Current rate of CS even in Government hospitals in Kerala is as high as 43%. In view of the upsurging CS rates in Kerala, we conducted a prospective observational study to evaluate the rate and determine the cause of Cesarean births according to ROBSON'S criteria in our institute.

Aim:
Evaluate CS rate and identify major contributors to CS in our institute.

Result :
CS rate in our institution for 2014-2016 was 35.57%, the major contributors being previous CS single cephalic >37wks and nulliparous single cephalic >37wks, induced patients.

Conclusion:
Reducing CS rates can seem daunting because there are so many contributing factors. Determining the most important contributors for CS rates gives you a place to begin. Robsons criteria identifies the subpopulations driving changes in CS rates.

KEYWORDS

Introduction:

Caesarean section rates are at an alarming rise in India.[1-3]
Current rate of CS even in Government hospitals in Kerala is as high as 43%.[4] According to WHO, there is no justification to have more than 10-15% CS.[5] Inspite of much effort to promote normal delivery and conducting innumerable training programmes for doctors on WHO protocols and use of partogram, our Health Department has not been able to bring down CS rates.

So where have we failed?
Quality assurance in labor and delivery is needed to reduce CS rates
In April 2015, WHO proposed that ROBSON'S classification be used as a global standard for assessing, monitoring and comparing CS rates within and between health care facilities to ensure quality assurance.[6,7]
Hence, we conducted study to determine the cause of upsurging Cesarean births with the help of ROBSON'S criteria in our institute.

Aim and methodology:
Study design: A prospective observational study

Aim: To evaluate the rate and causes of Caesarean Sections with the help of ROBSON'S criteria.

Inclusion criteria: All women who delivered at Amala Institute of Medical Sciences, Thrissur from January 2014- December 2016.

Results:
Out of 6333 deliveries, 2253(35.57%) were Caesarean sections. Out of all CS, 45.46% was Primary CS and 54.54% was repeat CS.

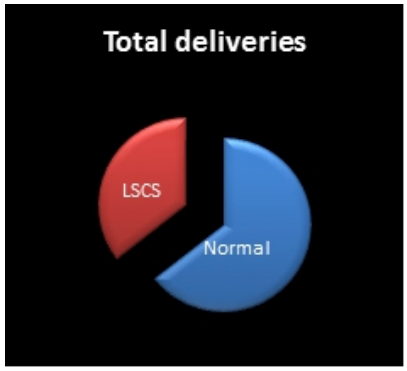

Chart no.1: Percentage of total CS among all deliveries

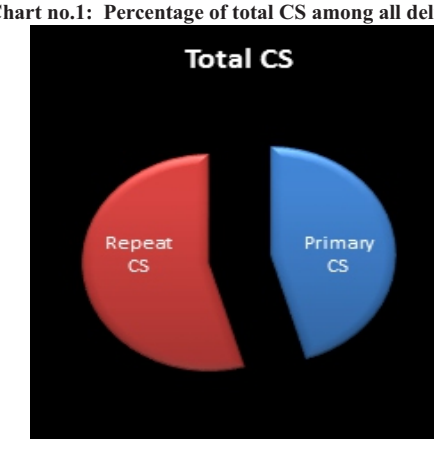

Chart no.2 Percentage of primary and repeat CS

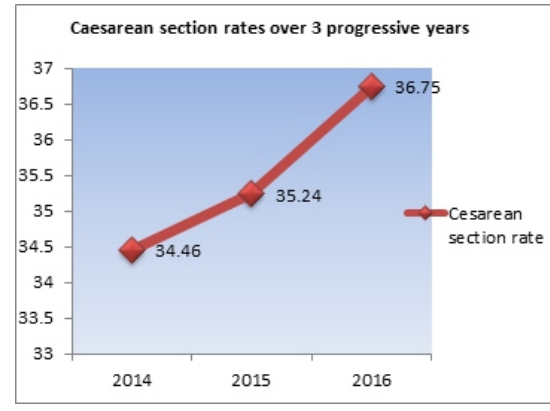

Chart no.3 Comparing CS trends over 3 yrs according to ROBSON's classification

Table no.1 Determining rate and causes of CS at our institution with ROBSON's classification

	ROBSON'S CLASSIFICATION		No. of CS	No.of women in the group	Relative size of group(%)	CS rate in the group(%)	Contribution by each group to total CS rate
1	Nulliparous, single cephalic,>37w	Spontaneous	250	1302	20.6	19.2	11.1
2	Nulliparous, single cephalic, >37w	(A)Induced	454	1262	19.9	36	20.2
		(B)CS prelabor	61	61	1	100	2.7
3	Multiparous, single cephalic, >37w	Spontaneous	89	1372	21.7	6.5	4
4	Multiparous, single cephalic, >37w	(A)Induced	102	789	12.5	12.9	4.5
		(B)CS prelabor	20	20	0.3	100	0.9
5	Previous CS, single cephalic, >37wks	(A)Spontaneous	240	269	4.2	89.2	10.7
		(B)Induced	1	1	0.01	100	0.1
		(C)CS prelabor	738	738	11.7	100	32.8
6	Nulliparous breech	(A)Spontaneous	27	27	0.4	100	1.2
		(B)Induced	0	0	0	0	0
		(C)CS prelabor	37	37	0.6	100	1.6
7	All multi breech(including previous CS)	(A)Spontaneous	37	37	0.6	100	1.6
		(B)Induced	0	0	0	0	0
		(C)CS prelabor	26	26	0.4	100	1.2
8	All multiple pregnancies(including previous CS)	(A)Spontaneous	11	53	0.8	20.7	0.5
		(B)Induced	11	27	0.4	40.7	0.5
		(C)CS prelabor	37	37	5.8	100	1.6
9	All abnormal lies (including previous CS)	(A)Spontaneous	3	3	0.05	100	0.15
		(B)Induced	0	0	0	0	0
		(C)CS prelabor	3	3	0.05	100	0.15
10	All single cephalic, <37 wks	(A)Spontaneous	30	165	2.6	18.2	1.3
		(B)Induced	10	38	0.6	26.3	0.4
		(C)CS prelabor	66	66	1	100	2.9

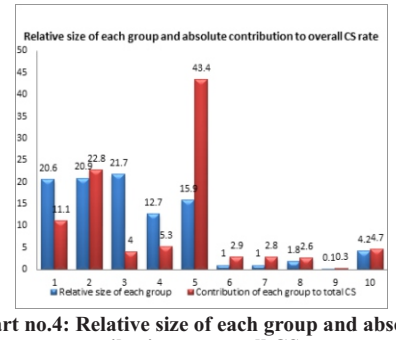

Chart no.4: Relative size of each group and absolute contribution to overall CS rate

Discussion:

We have noticed slightly increasing CS rates in our hospital over 3 years.

The distribution and size of the groups are standard compared to any international study.[8] The size and CS rate in group 9 signify good quality data. Nulli and multiparous distribution is also reasonably standard.

But when we compare the number of patients in group1 and 2(primi spontaneous vs induced labor), there is around 1:2 ratio instead of 1:1, signifying high induction rates in this cohort.

Size of group 8(multiple pregnancy) is slightly higher at 2.6%, as ours is a tertiary referral centre.

CS rates in group 1 and 3(primi and multi, spontaneous labor) are as low as any international comparison.

CS in group 2 is high, probably due to increased inductions ending up in complications like failed induction, failure to progress and MSAF, resulting in increased CS.

CS rate in group 4 is comparable. High rates in group 5,6,7 are standard internationally. CS in group 8 is increasing steadily. Rate of 100% in group 9 is expected.

What can be done to fight the increasing CS trend?

Group 1,2,3 and 4 accounts for 75.9% of all births and 43.1% of total CS, out of which 23.1%was in induced primi. To reduce CS in this group, we have to follow a practice of timely induction and that too only when absolutely indicated, use of pre-induction cervical ripening especially mechanical method, monitoring of labor progress by partogram, and proper counselling to reduce "on demand CS".

Group 5 accounts for 15.9% of all births and 43.4% of all CS. To reduce group 5, we need to reduce primary CS rates and encourage VBAC.

Group 6 and 7 accounts for 5.7% of all CS, and can be reduced by ECV near term and conducting assisted breech deliveries in properly selected patients.

Thus, auditing of CS is important in every institution to avoid unnecessary CS. Categorising under ROBSON's criteria makes inter-institutional comparisons more meaningful.

Advantages of ROBSON's classification:

- Simple and easy
- Totally inclusive and mutually exclusive, so each Caesarean falls into a single class.
- Easily derived from current obstetric databases.
- Allows evaluation and comparison of the contributors to the CS rate and their impact.
- Allows comparison between institutions, regions and countries, thus facilitating research at local, regional, national and international levels to better future care.

Disadvantages of ROBSON's classification:

- Does not give any idea regarding the actual indication for CS.
- Degree of urgency to perform CS is not given any importance.
- Does not give primary and repeat CS rates.

Conclusion:

Reducing CS rates can seem daunting because there are so many contributing factors. Determining the most important contributors for CS rates gives us a place to begin with.

Robsons criteria identifies the subpopulations driving changes in CS rates.Targetting our quality improvement strategies to the areas with the greatest impact helps us achieve our goal.

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