



Research article

A recent way of evaluation of cesarean birth rate by robson's 10-group system

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© The author(s). This is an open access article distributed under the terms of the Creative Commons Attribution License (<https://creativecommons.org/licenses/by-nc/4.0/>). See <https://jmpas.com/reprints-and-permissions> for full terms and conditions.**Received** – 20 January 2014, **Revised** - 25 January 2013, **Accepted** – 23 February 2014 (DD-MM-YYYY)**Refer This Article**Vijay Kansara, 2014. A recent way of evaluation of cesarean birth rate by robson's 10-group system. Journal of medical pharmaceutical and allied sciences, V 3 - I 1, Pages -151 – 153. Doi: <https://doi.org/10.55522/jmpas.V3I1.0039>.**ABSTRACT**

There is continuous increase in cesarean section rate worldwide with associated increase in both maternal morbidity as well as mortality comparing to vaginal delivery. so necessity has arisen to find out why cesarean section rate is increasing and how we can reduce cesarean section rate. To evaluate Cesarean birth Rate & to analyze different indication and frequency of CS based on the Robson's 10-group Classification system, so as to provide recommendation for reduction of CS rate. This is a retrospective case series. All the women delivered during June 2013 to December 2013 period of 7 months in the labor ward were included and Robson's system was used to classify them into 10 groups. CS rate in each groups were calculated. Cesarean section rate found 394/1570 (25%). Previous cesarean section more than 37 weeks single cephalic (robson ten classification-5) found most imp. contributor 11.59% (182/1570). Robson's ten classification is the efficient way to classify cesarean section according to their robson's ten classification group which suggest us where we have focus to decrease the cesarean section rate. We need to revise protocol for delivery of patient in group .

Keywords: Global Health, Robson's Ten Classification, Cesarean Section, WHO, Photodynamic therapy.**INTRODUCTION**

Caesarean section (CS) is the most commonly performed obstetric operation worldwide. Though CS is becoming increasingly safer but issue of maternal and neonatal morbidity is still there associated with cost factor in comparison to vaginal delivery. Increasing cesarean section rate is the global health issue. Rightly called as global epidemic in some countries. The Caesarean section rate has been increasing during the last 50 years. The rate was 5% in the 1940s and 1950s. In the late 1970s, the rate rose to 15% In the last decade there has been a dramatic increase in the Caesarean section rate worldwide, which now exceeds 30% in some regions.

Worries over such increasing CS rates have led the World Health Organization to advise that Cesarean Section (CS) rates should not be more than 15% with evidence that CS rates above 15% are not associated with additional reduction in maternal and neonatal mortality and morbidity. Analyzing CS rates in different institutes, including primary vs. repeat CS and potential reasons of these, provide important insights into the solution for reducing the overall CS rate.

To decrease the CS birth rate we need to understand the factors responsible for increase in CS birth rate & compare different indications. Comparison criteria should be accepted both nationally as well as internationally.

Dr Michael Robson has proposed a new classification system, the Robson Ten- Group Classification System to allow critical analysis of CS rates according to characteristics of pregnancy, which is very simple and useful and can be applied in different hospitals, different units world wide^[1].

METHODOLOGY

This is a retrospective study which includes all the patients delivered at GMERS Medical college sola between June 2013 to December 2013. Robson ten group classification system was applied to all patients and details of women were obtained under following headings:

Category of pregnancy

Single cephalic Single breech
 Single oblique or transverse lie Multiple pregnancy
 Previous obstetric records Nulliparous
 Multiparous(without previous CS) Multiparous(with previous CS)
 gestational age
 ≥ 37 weeks <37 weeks
 course of labour Spontaneous Induced CS before
 about(elective/emergency)(table no 1 is define full classification)

This classification system has been used in single-institution studies, national registries and recently with international comparisons. We have also used this classification system in our study [2].

RESULT

The total number of women delivered for the period of 7 months was 1570, out of which CS deliveries were 394. Overall, CS rate calculated in this specified period was 25% (Table 2). On analysis of CS according to Robson's classification, different rates of each group are shown separately.

Group 5 (previous CS group) made the greatest contribution to the total CS rate. Group 1 (Nullipara, term with spontaneous onset of labour) had the second highest contribution to the CS rate and then group 2 (Nullipara, term, elective CS or CS after failed induction) placed third.

Group 5 was further analyzed according to the indications of CS. Total cases of previous CS > 37 wks admitted were 185 out of 3 which Vaginal birth after caesarean (VBAC) & number of patient with repeat LSCS were 182/185.

In Group 1 (nulliparous, ≥ 37 wks in spontaneous labour) out of total 353 cases, 71 (20.1%) women underwent LSCS.

In Group 2 (nulliparous ≥ 37 wks, induced or CS before labour) out of total 158 women, 49 (31%) women underwent LSCS. (Table no. 2 contain over all classification rates %) [3].

DISCUSSION & CONCLUSION

Current methods of accessing CS rate, currently the rogeneity of CS classification does not allow valid comparisons. Specially there is a lack of clarity regarding operative indications and relevant obstetric history.

Figure-1 cesarean section according to indication

The classification of caesarean sections should.

Be relevant to obstetric care providers.

Include all caesarean sections.

Be easily derived from current obstetric database.

Have mutually exclusive criteria so each CS falls into single class.

Allow detailed analysis without excessive complexity.

Be applicable for local, regional, national and international use [4].

Robson's classification system is in accordance to above criteria and

is widely used worldwide.

Robson suggests reviewing 14 aspects of the above table no.1 before delving further into the data part of the table. The values referenced below for the expected relative size and CD rate of each Group are based on the experience of Dr. M. Robson.

The total number of cesareans and deliveries should be the sum of the number of each event in Robson groups 1 to 10 combined.

Group 9 should comprise 0.2-0.6% of women with a CD rate of 100%. Other values may reflect data collection issues (9).

Groups 1 and 2 usually account for 35-40% of all deliveries; Group 1 should be larger than Group 2.

Groups 3 and 4 usually account for 30-40% of women; Group 3 should be larger than Group 4.

The CD rate in Group 4 should be below 20% 9.

Group 5 should comprise no more than 10% of women 9.

Groups 6 and 7 should include 3-4% of all women, and Group 6 is usually twice the size of Group 7.

Unless the site has an IVF program or is a referral centre, Group 8 should include 1.5-2% of women.

Group 10 includes approximately 5% of women. Higher proportions (6- 7%) may be seen at referral centers and facilities with a high risk of preterm delivery.

If the CD rate in Group 10 is 15-16% it suggests a high proportion of women with spontaneous onset of preterm labour. Higher CD rates (30- 40%) in this Group reflect more women with CD following preterm labour induction or a cesarean delivery without labour.

A CD rate for Group 1 less than 10% is desirable and below 15% is achievable.

The CD rate for Group 3 should be 2.5-3%. If the CD rate exceeds 3%, inaccurate data collection should be investigated.

With good perinatal outcomes, a CD rate of 50-60% in Group 5 is excellent.

Groups 1, 2, and 5 usually account for two-thirds of all cesareandeliveries. The CD rate in Group 10 for 2010/2011 was 28.9% [5].

For the last 30 years, there has been a public concern about in-creasing CS rates. The increase has been a global phenomenon, the timing and rate of the increase has differed from one institute to another, and marked differences in rates persist. In our institute CS rate was ~25% and previous LSCS group made the highest contribution. It is important that efforts to reduce the overall CS rate should focus on reducing the primary CS rates and also encouraging VBAC in patients with previous LSCS. The robson classification demonstrates need to focus on the case of woman in group 1, 2, 3, and 5. Particularly if the cesarean section rate to be reduced. This system could be a frame work for auditing and analyzing different CS rates

and their reasons, if it use uniformly throughout the country, we can compare our rates, nationally as well as internationally. This will help both in reducing CS rates as well as identification of priority areas for the change in clinical practice ^[6, 7].

LIMITATIONS

Although this grouping methodology has been shown to be useful and replicable, there are limitations to the approach and to the analyses presented here. The Robson classification creates mutually exclusive and clinically relevant subgroups of women, but heterogeneity within group's remains. None of the analyses presented here take into account the demographic changes in the population of childbearing women (11). There may be some women who cannot be placed into any of above group due to incomplete information which is called group 99 in some research papers.

Significant changes in the relative size and contribution to the overall CD rate of a Group can result either from a change in demographics or clinical management of the Group itself, or from changes to other Groups.

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