ROBSON'S TEN GROUP CLASSIFICATION SYSTEM FOR REDUCING ABDOMINAL DELIVERY RATES IN 2ND MATERNITY HOSPITAL IN SAMARKAND

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Abstract
This retrospective study aimed to analyze the rate of LSCS and was conducted over a period of six months - December 2022 to May 2023 at 2nd maternity hospital in Samarkand. The total number of patients who delivered in our hospital during the defined study period was recorded and categorized as per the WHO accepted Robson's 10-group classification.

Keywords: Caesarean section, Robson's criteria, Previous LSCS, Obstetric audits.

INTRODUCTION

Lower Segment Caesarean Section(LSCS) is the most commonly performed obstetric operation worldwide. Since 1985, the international healthcare community has considered the ideal rate for caesarean sections to be between 10% and 15%. Since then, a rising trend of caesarean sections has been noted with the advent of electronic fetal monitoring, increased ante-partum surveillance, better operative techniques, availability of tertiary care neonatal facilities and a change in the physician & women's preference for a planned caesarean section. When medically justified, a caesarean section (CS) can effectively prevent maternal and perinatal mortality and morbidity. High caesarean rates are an issue of international public health concern as it increases the CS related morbidity. As with any surgery, caesarean sections are associated with short term and long term risks which can extend many years beyond the current delivery and affect the health of the woman, her child, and future pregnancies. CS may be associated with an increased risk of abdominal pain, hysterectomy, ureter and vesical injury, neonatal respiratory morbidity, fetal death, placenta accreta/ percreta, and uterine rupture in future pregnancies.[3,4] These risks are higher in women with limited access to comprehensive obstetric care. In recent years, governments and

clinicians have expressed concern about the rise in the numbers of caesarean section births and the potential negative consequences on maternal and infant health.

MATERIALS AND METHODS

The present study was carried out retrospectively over a period of six months- from December 2022 to May 2023 in 2nd maternity hospital in Samarkand; a tertiary care institute which cares for over 3000 institutional deliveries per year. All cases of institutional deliveries during the defined study period were recorded & categorized according to the WHO accepted Robson's 10 group classification. The Robson Ten-Group Classification System, proposed by MS Robson in the year 2001 allows critical analysis according to characteristics of pregnancy by classifying all women into one of 10 categories that are mutually exclusive and, as a set, totally comprehensive **(Table I).**

Table I- Robson' 10-Group Classification:[1]

Sr.No	Robson 's 10-group classification
1	Nulliparous, single cephalic, >37 wks in spontaneous labor
2	Nulliparous, single cephalic, >37 wks, induced or CS before labor
3	Multiparous (excluding previous CS), single cephalic, >37 weeks in spontaneous labor
4	Multiparous (excluding previous CS), single cephalic,>37 weeks, induced or CS before labor
5	Previous CS, single cephalic, >37 weeks
6	All nulliparous breeches
7	All multiparous breeches (including previous CS)
8	All multiple pregnancies (including previous CS)
9	All abnormal lies (including previous CS)
10	All single cephalic, <36 wks (including previous CS)

RESULTS AND DISCUSSION

The total number of women delivered over the study period were 1645, out of which CS deliveries were 523. Overall, caesarean rate calculated for our institution in the specified period was **31.8%**. On analysis of data according to Robson's classification, caesarean rates of each group were calculated to determine their contribution to the overall CS rate **(Tables II,III).**

Group 5 (previous CS group) made the greatest contribution (7.5%) to the total CS rate. Group 2 (Nullipara, Term, elective CS or after failed induction) had the second highest contribution (6.7%) to the CS rate & Group 10 [All single cephalic, <36 wks (including previous CS)] then placed third at 5.9% to the overall CS rate. There was a 100% caesarean rate in Robson group no.9 i.e. all abnormal lies (7/7 cases), inclusive of all other lies apart from longitudinal lie (i.e. vertex and breech).

Table II-Caesarean Section rate in each group:

Sr.No	Robson's 10-group classification	Total Number of deliveries in each group	No. of women delivering by CS in each group	CS rate in each group (%)
1	Nulliparous, single cephalic, >37 wks in spontaneous labor	271	40	14.8
2	Nulliparous, single cephalic, >37 wks, induced or CS before labor	261	110	42.1
3	Multiparous (excluding previous CS), single cephalic, >37 weeks in spontaneous labor	399	29	7.3
4	Multiparous (excluding previous CS), single cephalic, >37 weeks, induced or CS before labor	176	46	26.1
5	Previous CS, single cephalic, >37 weeks	151	123	81.5
6	All nulliparous breeches	38	30	78.9
7	All multiparous breeches (including previous CS)	57	30	52.6
8	All multiple pregnancies (including previous CS)	21	11	52.4
9	All abnormal lies (including previous CS)	7	7	100
10	All single cephalic, <36 wks (including previous CS)	264	97	36.7

Table III- Relative size and its contribution to caesarean rate in the study population:

Sr.No	Robson 's 10-group classification	Relative size of group (%)	Contribution made by each group to overall CS rate of 31.8% (%)
1	Nulliparous, single cephalic, >37 wks in spontaneous labor	16.5 (271/1645)	2.4 (40/1645)
2	Nulliparous, single cephalic, >37 wks, induced or CS before labor	15.9 (261/1645)	6.7 (110/1645)
3	Multiparous (excluding previous CS), single cephalic, >37 weeks in spontaneous labor	24.3 (399/1645)	1.8 (29/1645)
4	Multiparous (excluding previous CS), single cephalic,>37 weeks, induced or CS before labor	10.7 (176/1645)	2.8 (46/1645)
5	Previous CS, single cephalic, >37 weeks	9.2 (151/1645)	7.5 (123/1645)
6	All nulliparous breeches	2.3 (38/1645)	1.8 (30/1645)
7	All multiparous breeches (including previous CS)	3.5 (57/1645)	1.8 (30/1645)
8	All multiple pregnancies (including previous CS)	1.3 (21/1645)	0.7 (11/1645)
9	All abnormal lies (including previous CS)	0.4 (7/1645)	0.4 (7/1645)
10	All single cephalic, <36 wks (including previous CS)	16.0 (264/1645)	5.9 (97/1645)

This was the first time to the authors' knowledge, that caesarean rates Samarkand have been investigated according to the Robson's classification in an attempt to ascertain which clinically relevant groups were contributing to the increasing caesarean rate over time. However, the pregnant women included in the study those who delivered in our institution and might not reflect the situation in the rest of the country, or even reflect on the cesarean rate in the state of Rajasthan, India. It is also possible that caesarean section rate may have been overestimated since vaginal deliveries at home may have been under-reported. Limitations of the study are that this classification system does not account for analysis of elective caesarean on maternal request or planned caesarean section for specific conditions (example-placenta previa) or pre-existing medical conditions.

CONCLUSION

Obstetric audits in the institution & practice of evidence-based obstetrics shall help in reducing morbidity associated with caesarean section. Individualization of the indication & careful evaluation can help us limit peri-natal morbidity & mortality. It is important that efforts to reduce the overall CS rate focus on reducing the primary CS rate & judicious use of VBAC be used to decrease rate of repeat CS. Every effort should be made to provide caesarean sections to women in need, rather than striving to achieve a specific rate.

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