
Using The Robson Classification for Searching Ways of Decreasing Rates of Abdominal Delivery

Abduganiyeva Hilola
Master of Samarkand State Medical University

Samiyeva Gulnoza Utkurovna
Associate Professor of Samarkand State Medical Institute

Abdirashidova Gulnoza Ablakulovna
Assistant of Samarkand State Medical University

Abstract

Currently, the WHO and the International Federation of Gynecology and Obstetrics (FIGO) recommend the Robson Ten Group Classification System as an effective monitoring tool to compare CS rates within and between different obstetric departments over time. This system uses obstetric characteristics such as history, gestational age, prior CS, onset of labor (spontaneous or induced), presentation, and number of fetuses (singleton or multiple) to classify women into ten groups. The Robson grading system for CS in healthcare settings may result in lower CS rates.

Keywords: Robson classification, caesarean section, pregnancy.

Introduction

Cesarean section (CS) is the most common obstetric operation performed in the world. In recent decades, the incidence of C-sections has been steadily increasing worldwide. The rates of KCs show great variation between countries worldwide, ranging from 0.4 to 40 percent. It has been reported that subjective signs, such as poor fetal status and obstructed labor, contribute more to the increased incidence of FVC than objective signs. Indeed, the steady increase in the frequency of CCs is mainly due to nonclinical indications, such as physicians' fear of malpractice litigation, patients' fear of labor pain, convenience for the mother in preplanning the day of delivery, and, last but not least, the misconception that CCs ensure a complication-free delivery. Many clinicians believe that a primary CC will benefit the patient, regardless of the underlying indications. On the contrary, there is recent evidence that a vaginal delivery will be a better option for the health of the mother and newborn. Moreover, women who have had a CC are likely to choose another CC in subsequent pregnancies, leading to a further increase in the frequency of CCs with the well-known complications associated with repeat surgeries.

In cases where spontaneous vaginal delivery (SVR) is not possible or contraindicated, failure to perform a CC can endanger the life of the mother and fetus. However, it is also a reality that FVCs are also performed without clear indications or with vague indications, such as obstructed labor, with intact fetal membranes. CoCs are considered life-saving procedures, but they are not without risks associated with current or future pregnancies. Some of the most common short- and long-term complications associated with a CC are increased chances of maternal morbidity and mortality, increased need for blood transfusions, prolonged hospital stays, postpartum infections, placenta retention, stillbirth, and postpartum bleeding. This indicates that some women may be unnecessarily exposed to these complications if not chosen correctly, while conversely, some women may not receive a CC when they really need it. Rates of CS are relatively high among women with education (minimal secondary education) living in urban areas or with affluent socioeconomic status. It was found that in rural areas, lack of access to appropriate health care facilities, staff and equipment leads to increased maternal morbidity and mortality.

Purpose of the Study:

Evaluation of the frequency of cesarean section and the groups with the highest risk of cesarean section in Samarkand maternity hospitals using the Robson classification system.

Materials and Methods

A total of 58 women who underwent inpatient cesarean section between September 2021 and September 2022 were included in the study population. Written consent was taken from all study participants. Women who underwent laparotomy for uterine rupture or women with missing documentation were excluded.

For all women included: maternal history, biodata, symptomatology, clinical examination, management outcomes, pregnancy-related information (gestational age, fetal presentation, number of fetuses and onset of labor), and maternal and fetal outcomes at discharge (complications, Apgar score recorded after five minutes, birth weight). The dependent variable was the Robson classification group (Table-1). All information about the study was noted on a pre-designed form.

Table 1. Robson classification. KS: cesarean section.

Robson Classification	Description
1	Unborn women with singleton pregnancy, cephalic presentation, ≥ 37 weeks' gestation at spontaneous delivery
2A	Unborn women with singletree pregnancy, cephalic presentation, ≥ 37 weeks' gestation, who have had an induced delivery
2B	Non-pregnant women with singleton pregnancy, cephalic presentation, ≥ 37 weeks' gestation, who were delivered by CRL prior to delivery.
3	Women without a history of uterine scarring, single pregnancy, cephalic presentation, gestational age ≥ 37 weeks for spontaneous delivery
4A	Women without a history of uterine scar, single pregnancy, cephalic presentation, ≥ 37 weeks' gestation, who had an induced delivery
4B	Women with a history of multiple births without uterine scar, singleton pregnancy, cephalic presentation, ≥ 37 weeks' gestation, who delivered with a C-section before delivery
5	All women with a history of at least one uterine scar, singleton pregnancy, cephalic presentation, gestational age ≥ 37 weeks.
6	All women who have not given birth with a singleton pregnancy, breech presentation
7	All women who have had a second pregnancy with singletons, breech presentation, including women with a history of uterine scarring.
8	All women with multiple pregnancies, including women with a history of uterine scarring.
9	All women with a singleton pregnancy with transverse or oblique presentation, including women with a prior uterine scar
10	All women with a singleton pregnancy, cephalic presentation, < 37 weeks gestation, including women with a history of uterine scarring.

The Robson group was identified based on four obstetric concepts (with their parameters) - pregnancy category, prior obstetric history, course of labor, and gestational age. Absolute maternal indications included obstructed labor, major prenatal hemorrhage (APH), malpresentation (transverse, oblique), and uterine rupture. Non-absolute indications included fetal compromise, prior CC, lack of progress, breech presentation, severe preeclampsia, and eclampsia. Results were presented as frequencies, percentages, mean values, and standard deviation.

Results and Discussion

A total of 58 births occurred during the study period. Overall, the mean age was 25.47 ± 4.8 years, while the majority of women, 47 (81.0%), were between the ages of 20 and 35 years. Most women, 39 (67.2%) were from urban areas of residence, 32 (55.2%) were multiparous, 26 (44.8%) were 37-42 weeks gestational age, 37 (63.8%) had a history of cesarean section and 54 (93.1%) had a fetal head presentation (Table-2).

Table 2. Characteristics of study participants.

Characteristics		Number (%)
Age (years)	<20	6 (10,3%)
	20-35	47 (81%)
	>30	5 (8,6%)
Region of residence	Urban	39 (67,2%)
	Rural	19 (32,8%)
Number of fetuses	Single fetus	26 (44,8%)
	Multiple fetuses	32 (55,2%)
Births	unborn	17 (29,3%)
	second-born	41 (70,1%)
Gestational age (weeks)	<37	32 (55,2%)
	37-42	26 (44,8%)
	>42	0
History of previous caesarean section	No	21 (36,2%)
	1	10 (17,2%)
	>1	27 (46,5%)
Start of labor	Spontaneous	29 (50%)
	Induced	2 (3,4%)
	Cesarean section before delivery	27 (46,5%)
Fetal presentation	Cephalic	54 (93,1%)
	Other part	4 (6,9%)
Apgar score (after 5 minutes)	≤7	9 (15,6%)
	>7	49 (84,4%)
Birth weight (grams)	<2500	11 (18,9%)
	2500-4000	44 (75,8%)
	>4000	3 (5,3%)

The distribution of all deliveries performed during the study period according to Robson classification is shown in Table 3. The majority of patients, 29 (50%), were from Group 10. Group 5 and Group 1 were 2nd and 3rd in frequency, accounting for 8 (13.7%) and 6 (10.3%) cases, respectively.

Table 3. Distribution of cesarean section by Robson classification.

<i>Classification</i> <i>n</i>	Description of Robson's 10-group classification	<i>Number</i>	<i>(%) Contribution of each group to the total CS</i>
1	Unborn women with singleton pregnancy, cephalic presentation, ≥ 37 weeks' gestation with spontaneous delivery	6	10,3
2A	Unborn women with singleton pregnancy, cephalic presentation, ≥ 37 weeks' gestation, who had an induced delivery	1	1,7
2B	Non-pregnant women with singleton pregnancy, cephalic presentation, ≥ 37 weeks' gestation, who delivered by CRL prior to delivery.	2	3,4
3	Women without a history of uterine scarring, single pregnancy, cephalic presentation, gestational age ≥ 37 weeks with spontaneous delivery	-	-
4A	Women without a history of uterine scar, single pregnancy, cephalic presentation, ≥ 37 weeks' gestation, who had an induced delivery	2	3,4
4B	Women with a history of multiple births without uterine scar, singleton pregnancy, cephalic presentation, ≥ 37 weeks' gestation, who delivered with a C-section before delivery	2	3,4
5	All women with a history of at least one uterine scar, singleton pregnancy, cephalic presentation, gestational age ≥ 37 weeks.	8	13,7
6	All women who have not given birth with a singleton pregnancy, breech presentation	3	5,6
7	All women who have had a second pregnancy with singletons, breech presentation, including women with a history of uterine scarring.	1	1,7
8	All women with multiple pregnancies, including women with a history of uterine scarring.	2	3,4
9	All women with a singleton pregnancy with transverse or oblique presentation, including women with a prior uterine scar	2	3,4
10	All women with a singleton pregnancy, cephalic presentation, < 37 weeks gestation, including women with a history of uterine scarring.	29	50

The indications for caesarean section are listed in Table 4. A prior cesarean section (20.7%) and fetal distress (18.9%) were the most common indications.

Table-4. Indications for cesarean section in the present study (n=58).

Indications	<i>Number (%)</i>
Previous C-section	12 (20,7%)
Fetal distress	11 (18,9%)
Hypertensive disorders of pregnancy	5 (8,6%)
Unsuccessful induction of labor	4 (6,8%)
Cephalothasic disproportion	4 (6,8%)
Maternal requests	6 (10,3%)
Narrow pelvis	7 (12%)
Abnormal presentation	5 (8,6%)
Placental detachment	4 (6,8%)

Conclusions

The World Health Organization has endorsed a CC rate < 15% to balance the risk and benefit of CCs. There are concerns that rising trends in CF rates mean lower birth pain thresholds, less experience in the use of instrumental delivery, malpractice, induction of labor without an indication, and maternal requests. It is very important to continue to assess COP rates over time and compare them with past data to note possible areas of improvement to reduce overall COP rates.

In this study, Group 10, Group 5, and Group 1 were the most common groups, accounting for 50%, 13.7%, and 10.3% of cases, respectively. Group 10, followed by group 5, contributed most of the proportion to the total number of CS cases. Overall, 55.2% of women belonged to a gestational age group of less than 37 weeks, so this may clarify more than half of Group 10 cases of CF, showing that these women have complications such as hypertensive disorders of pregnancy, reduced fetal mobility, distress, or intrauterine delay. Other common complications among these cases are preterm delivery and premature rupture of the fetal bladder.

Thus, we evaluated the frequency of cesarean section according to the WHO recommendations using the Robson methodology. We were able to identify a reserve for reducing the frequency of cesarean section in improving the use of labor induction and labor intensification methods, CTG evaluation. In addition, we consider the following to be important: providing an opportunity for independent delivery with a uterine scar, analysis of indications for elective cesarean section.

Used Literature

1. Villar, J.; Valladares, E.; Wojdyla, D.; Zavaleta, N.; Carroli, G.; Velazco, A.; Shah, A.; Campodónico, L.; Bataglia, V.; Faundes, A.; et al. WHO 2005 global survey on maternal and perinatal health research group. Caesarean delivery rates and pregnancy outcomes: The 2005 WHO global survey on maternal and perinatal health in Latin America. *Lancet* 2006, 367, 1819–1829.
2. Shah, A.; Fawole, B.; M'imunya, J.M.; Amokrane, F.; Nafiou, I.; Wolomby, J.J.; Mugerwa, K.; Neves, I.; Nguti, R.; Kublickas, M.; et al. Cesarean delivery outcomes from the WHO global survey on maternal and perinatal health in Africa. *Int. J. Gynaecol. Obstet.* 2009, 107, 191–197.
3. Chaves, S.C.; Cecatti, J.G.; Carroli, G.; Lumbiganon, P.; Hogue, C.J.; Mori, R.; Zhang, J.; Jayaratne, K.; Togoobaatar, G.; Pileggi-Castro, C.; et al. Obstetric transition in the World Health Organization Multicountry, Survey on Maternal and Newborn Health: Exploring pathways for maternal mortality reduction. *Revista Panamericana Salud Pública* 2015, 37, 203–210.
4. Istituto Superiore di Sanità. Available online: <http://www.snlg-iss.it> (accessed on 10 December 2019).
5. Nelson, D.B. New or not-so-new labor management practices and cesarean delivery for arrest of progress of labour. *AJOG* 2019, 222, e1–e71.
6. Barber, E.L.; Lundsberg, L.; Belanger, K.; Pettker, M.C.; Funai, E.F.; Illuzzi, J.L. Contributing Indications to the Rising Cesarean Delivery Rate. *Obstet. Gynecol.* 2011, 118, 29–38.
7. Angeja, A.C.; Washington, A.E.; Vargas, J.E.; Gomez, R.; Rojas, I.; Caughey, A.B. Chilean women's preferences regarding mode of delivery: Which do they prefer and why? *BJOG* 2006, 113, 1253–1258.
8. Lilford, R.J.; Van Coeverden de Groot, H.A.; Moore, P.J.; Bingham, P. The relative risks of caesarean section (intrapartum and elective) and vaginal delivery: A detailed analysis to exclude the effects of medical disorders and other acute pre-existing physiological disturbances. *BJOG* 1990, 97, 883–892.
9. Morrison, J.J.; Rennie, J.M.; Milton, P.J. Neonatal respiratory morbidity and mode of delivery at term: Influence of timing of elective caesarean section. *BJOG* 1995, 102, 101–106. [Google Scholar] [CrossRef]
10. Sandall, J.; Tribe, R.M.; Avery, L.; Mola, G.; Visser, G.H.; Homer, C.S.; Gibbons, D.; Kelly, N.M.; Kennedy, H.P.; Kidanto, H.; et al. Short-term and long-term effects of caesarean section on the health of women and children. *Lancet* 2018, 392, 1349–1357.