



## CAESAREAN SECTION BASED ON ROBSON CLASSIFICATION SYSTEM

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### Annotation

Recent data indicate that one in five women undergo caesarean section (CS). In the last decade, there has been a dramatic increase in the caesarean section rate worldwide, which now exceeds 30% in some regions. Thus, the increasing rate of caesarean section became a matter of international public health concern. Our study aimed to classify the CS-based on Robson ten group classification system (RTGCS) criteria which will subsequently enable us to standardise the indication of CS and establish protocols to reduce the number of CS in our set up.

**Keywords:** Caesarean section, Robson ten group classification system, pregnancy

### INTRODUCTION

Recent data indicate that one in five women undergo caesarean section (CS), and in most regions of the world, CS rates continue to rise.<sup>1</sup> 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 increases have led the world health organization to advise that caesarean section rates should not be more than 15% as an increase in CS rate is not associated with an additional reduction in maternal and neonatal mortality and morbidity.

### MATERIALS AND METHODS

World health organization (WHO) has recommended classifying all CS in a standard, reliable grouping system. Of the many proposed classification system WHO and the international federation of gynecology and obstetrics (FIGO) have identified Robson ten group classification system (TGCS) to be the most appropriate classification system to be used globally for monitoring, comparing and understanding caesarean rates over time and between different institutions. Our study aimed to classify the CS-based on RTGCS criteria and address the factors contributing to increasing CS





cases in our scenario which will subsequently enable us to standardise the indication of CS and establish protocols to reduce the number of CS in our set up.

## RESULTS AND DISCUSSION

This was a retrospective study carried in our hospital from January 2019 to April 2020 in the department of Obstetrics and Gynaecology, ESI Hospital, Okhla, New Delhi. Data was compiled based on Robson-10 group classification system in a preformed structured pro forma (Table 1).

Table 1: Robson ten group classification system (TGCS).

Robson group	Characteristics
I	Nulliparous; single cephalic term pregnancy; spontaneous labour
IIA	Nulliparous; single cephalic term pregnancy; induced labour
IIB	Nulliparous; single cephalic term pregnancy; planned caesarean delivery
III	Multiparous without uterine scar; single cephalic term pregnancy; spontaneous labour
IVA	Multiparous without uterine scar; single cephalic term pregnancy; induced labour
IVB	Multiparous without uterine scar; single cephalic term pregnancy; planned caesarean delivery
V	Multiparous with previous caesarean section; single cephalic term pregnancy
VI	Nulliparous; single breech pregnancy
VII	Multiparous; single breech pregnancy
VIII	All women with multiple pregnancy
IX	All women with a single oblique or transverse pregnancy
X	All women with a single cephalic preterm pregnancy

The parameters considered were according to the classification system: Parity (with/without previous CS), Gestational age (>37 weeks/<37 weeks), Fetal presentation (cephalic/breech/abnormal lie), Number of fetuses (single/multiple), Onset of labour (spontaneous/ induced/preterm).

For each case, data was collected from the delivery register maintained in our labour room. Details were entered in the Microsoft Excel sheet and analysed. Total of 1013 records was analysed out of which 16 were excluded from the group as they had incomplete information regarding the indication of CS and/or period of gestation. Thus, a total of 997 cases were included in our study.



The total number of deliveries over this period in the hospital was 2936 out of which the number of cesarean section was 1013 which denotes that overall CS rate in our hospital over the specified period was 34.5%. Total of 1013 records was analysed out of which 16 were excluded from the group as they had incomplete information regarding the indication of CS and/or period of gestation. Thus, a total of 997 cases were included in our study.

On analysis of CS according to Robson's classification, different rate of each group was shown separately (Table 2).

Table 2: Distribution of CS based on Robson criteria (n=997).

Class	N	Percentage
I	95	9.5
IIA	221	22.1
IIB	37	3.7
III	71	7.12
IVA	48	4.8
IVB	19	1.9
V	369	37
VI	44	4.4
VII	35	3.5
VIII	17	1.7
IX	10	1
X	31	3.1

Figure 1: Distribution of CS based on Robson criteria.

All women with one or more previous caesareans (group V) had the maximum number of caesareans, 37%, followed by nulliparous, single, cephalic, term pregnancy (induced) i.e group II, 22.1% and nulliparous women more than 37 weeks in spontaneous labour (group I), 9.5%.

Group V was further analysed for the indication of CS and it was found that out of 369 cases 146 cases were elective (39.5%) and 223 cases were emergency caesarean cases (60.4%).

Out of 223 cases, 73 cases were due to failed trial of labour after caesarean (TOLAC) i.e 32.7% cases.



## CONCLUSION

Every attempt should be made to decrease the CS rate to decrease maternal mortality across the world. All deliveries and caesareans should be universally categorized by the Robson TGCS. An attempt should be made to evaluate the group contributing most to the CS rate and interventions should be made accordingly. Patient counselling should be done in detail especially in the case of previous CS. Institution protocols should be strictly followed with time to time audit to rationalise the CS rates.

## REFERENCES

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