

# One Year Study of Caesarean Section Rate in Govt. District Hospital with Robson TEN Group Classification

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**Abstract:** *Objectives:* To determine the relative contribution of each group to TEN group classification. *Methodology:* Retrospective study conducted at siddhipet dist. Hospital from Aug. 2016 to July. 2017. *Results:* The overall caesarean section rate was 49.68% . The contribution of group 5 is highest 48.9% followed by group 1 - 25% and group 4 being third highest which is 9.31 % of overall caesarean section rate. *Conclusion:* Group -5 caesarean section rate can be decreased by increasing number of trial of labour after caesarean section (TOLAC) & by decreasing primary caesarean section rate. Group -1 caesarean section can be decreased by better monitoring facilities with partograph and by individualizing labour. Group -4 caesarean section rate can be minimized by better induction methods.

**Keywords:** caesarean section rate, Robson classification, contribution

## 1. Introduction

The rates of caesarean section are raising day to day worldwide (1 & 2). There are several reasons for raising caesarean section rates at different health sector levels. WHO advices caesarean section rate should not be more than 15 % .Soanalyzing caesarean section rate through Robson TEN group classification system will allow identifying the reasons for increasing caesarean section rate & concentrating the areas which are lacking and to rectify the defects. This Robsn Ten group classification is universal easy and very useful for comparing the results among institutes and also between different countries. The rate of increase is highest in low income countries (3). Incesase In use of ceasarean section particularly in public sector and in low resource setting maynotaebly affect health services by increased rates of maternal and neonatal complications (4), but also in economic terms (5). We have opted this study to analyse the reasons of increase of caesarean section rate in district hospitaland consider the measures for reducing the caesarean section rates.

## 2. Aims & Objectives

- 1) To study the overall caesarean section rate in district hospital siddhipet
- 2) To determine the contribution of each group to overall caesarean section rate with Robson Ten group classification

## 3. Methodology

The study was retrospective study conducted from Aug. 2016 to July 2017 at district hospital siddhpert. The deliveries were conducted by ANM and Nursing staff.In this centre difficult , prolonged deliveries and instrumental deliveries were conducted by a single duty doctor. There were a total of 3804 delivaries in 1 year period. All the patients who delivered by caesarean section were included in the study. Data was collected by a proforma including all socio demographic variables andobstetric relevant data. Women were classified into 10 groups according to Robsons Ten

group classification. For each group we calculated its relative size and its contribution to overall caesarean section rate.

## 4. Results

The total no. of women delivered are 3804 out of which 1890 were delivered by caesarean section so the overall cesarean section rate was 49.68%. Based on Robson Ten group classification, Group 5 contributed maximum caesarean section rate of 48.9% and second highest being group 1 contributing 25% , group 4 is third highest contributing 9.31% of overall ceasarean section rate.

Contribution of each group to total no of deliveries	
Group 1.Nulliparous , single cephalic ≥ 37 weeks in spontaneous labour	12.43%
Group 2.Nulliparous , single cephalic ≥ 37 weeks induced or C/S	0.39%
Group 3.Multiparous , single cephalic ≥ 37 weeks in spontaneous labour	1.26 %
Group 4.Multiparous , single cephalic ≥ 37 weeks induced or C/S before labour	4.6 %
Group 5. Previous C/S , single cephalic ≥ 37 weeks	24.34%
Group 6. All nulliparous breach	0.47 %
Group 7. All multiparous breach	0.21 %
Group 8. All multiple pregnancies	0.73%
Group 9. All abnormal lies including previous C/s	0.36%
Group 10. All single cephalic ≤ 36 weeks including previous C/S	0.31%

### Contribution of each group to overall caesarean rate

Group	Percentage	Rank
1	25.02	2
2	0.79	7
3	2.5	4
4	9.31	3
5	48.91	1
6	0.95	6
7	0.42	10
8	1.48	5
9	0.74	8
10	0.63	9

**Overall caesarean section rate in primi and multi**

Parity	Number	Percentage (%)
Primi	533	14.01
Multi	1357	71.79

**5. Discussion**

Robson's Ten group classification is simple to use and total sample can be included. It is easy to compare the results between different institutions also between different countries. (6) The caesarean section rate in our study was 49.68% which correlated with caesarean section rate of Brazil, Mexico and Turkey where the caesarean section rate exceeded 40% (7). Dhodapkar's Betal study the caesarean section rate was 32.6%, Patel's 40% (8), Katke's 25.7% (9), Abdul Aleem's 32-38% (10). Women who have previously had caesarean section are an increasingly important determinant to overall caesarean section rate in countries with a moderate or low human development index (11). In our study also Group 5 contributed 48.9%. In the state of Telangana, Govt. in order to increase and to provide free maternity services, schemes were provided to the patients which increased the census and referrals to the district hospital Siddhipet. This district hospital Siddhipet is a newly established teaching hospital where the staff including obstetricians, neonatologists, anaesthetists, and blood bank facilities have to be improved to go for TOLACS and decrease the caesarean section rate. In Mbaye M et al study (12) Group 5 is 20.5%, Samba et al study (13) the Group 5 is 11.2%, Wanjaris A (14) is 32.8%, Shrisath A (15) is 54.5%, Kansara Vijay (16) 46.1%

The caesarean section rate has to be decreased so as to decrease the Group 5 caesarean section rate also. In our study Group 1 caesarean section rate was 25.02%, May's study group 1 C/s rate was 34.2%, Costa et al study 24%, Dhodapkar's rate was 24%, Shristh A (11) 19.6%, Kansara Vijay (12) c/s rate is 20.11%. The caesarean section rate in Group 1 can be reduced by following the partograph, and if the maternal and fetal parameters are within normal limits not to follow the strict time limits for labour. Each labour has to be individualized. With increased usage of CTG machines the caesarean section rate is also increasing, the c/s rate of group 6, 7 & 9 was 0.67%, 0.3% & 0.5%. The obstetricians have to be trained in external cephalic version to reduce the caesarean section rate, the caesarean section rate in Group 4 is 6.64%, the methods of induction has to be changed and we have to go for spontaneous labour than induction to decrease caesarean section rate. Need to evaluate the best induction methods based on the indication for which induction, age of the patient, Bishop score, Parity status, weeks of gestation and integrity of uterus.

**6. Conclusion**

Measures have to be taken to provide free best maternity services for which the infrastructure has to be increased by providing more number of working staff, obstetricians, neonatologist, anaesthetist, blood bank and monitoring facilities have to be increased, these can decrease the caesarean section rate and unnecessary morbidity can be reduced from maternal side, economically to the Govt the cost of medicines and patient stay in the hospital can be

reduced. We can have more number of healthy and earning women to the society also.

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