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RISING TRENDS OF CAESAREAN SECTION WORLDWIDE AND IN PAKISTAN

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Abstract:
Introduction: *Caesarean section is one of the most widely performed surgical procedures in obstetrics worldwide.* ***Objectives of the study:*** *The main objective of the study is to analyse the rising trends of caesarean section worldwide and in Pakistan.* ***Material and methods****: This cross sectional study was conducted at Rawalpindi Medical University, during March 2019 to November 2019. This study was based on the local female population of Pakistan. Total number of selected patients was 500. Thorough history was taken and complete examination done. The data was collected through a questionnaire.* ***Results:*** *There were total 500 deliveries during this. On comparing the indications of cesarean section in two groups (table 1), fetal distress accounted for 112 cases in primigravida while it was an indication for 64 cases in multigravida (p value <0.001). Other indications were comparable in both the groups except for APE and APH. In primigravida, APE was responsible for 4.42% cesarean sections as compared to 0.73% cases in multigravida (p value <0.01).* ***Conclusion:*** *It is concluding that the current rates of CS, except for the least developed countries, are consistently higher than what is considered medically justifiable. Rate of primary caesarean section in primigravida is increasing as elsewhere and is higher than multigravida.*

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INTRODUCTION

Caesarean section is one of the most widely performed surgical procedures in obstetrics worldwide. It was mainly evolved as a lifesaving procedure for mother and foetus during the difficult delivery. High caesarean section rate has been recognized as a major health problem in many countries. There is a massive public interest and debate on both the cause and appropriateness of increasingly employing a surgical procedure to short circuit or entirely bypass labour and delivery [1]. Although, caesarean delivery greatly improves obstetric outcomes when clinically indicated, excessively high caesarean delivery rates have raised concern about the health and economic consequences of this practice. Caesarean delivery has been shown to substantially increase the risk of maternal and perinatal morbidity [2]. Maternal mortality among women who undergo caesarean section is 4-10 times higher than among women who deliver vaginally and uterine scarring from a caesarean can undermine reproductive health [3]. A high CSR does not confer any additional benefits but have resource implications for health services. The increased morbidity due to C-sections is 5-10 times that for a vaginal delivery. Countries with some of the lowest perinatal mortality rates in the world have CSR of under 10% [4].

At most of the multiparous women have had easy vaginal deliveries they do not pay much attention to the antenatal care they deserve. Moreover, the socio-economic condition of these patients does not permit them to have adequate balanced diet, which the pregnant stage demands [5]. These patients get expert supervision only when unforeseen emergency arises during pregnancy and labour. The relative ease with which some multiparous women deliver in the presence of faulty position and presentation may account for false sense of security [6].

Objectives of the study

The main objective of the study is to analyse the rising trends of caesarean section worldwide and in Pakistan.

MATERIAL AND METHODS:

This cross-sectional study was conducted at Rawalpindi Medical University, during March 2019 to November 2019. This study was based on the local female population of Pakistan. Total number of selected patients was 500. Thorough history was taken and complete examination done. The data was collected through a questionnaire. Vitals were recorded and patients were closely monitored in labor room for fetal heart rate and progress of labor. Indication for cesarean section was noted before the operation was done and any intraoperative or postoperative complication were observed and noted till the discharge of the patient from the hospital. The explanatory or independent variables selected for this study were included women's age, parity; women's education, women's current working status, wealth index, region, area of residence (urban or rural) and ethnicity. We computed crude C-section rates according to women's sociodemographic characteristics and then estimated the adjusted C-section rates standardized for maternal age and parity through a direct standardization method,

Statistical analysis

Statistical analysis was done by chi square test of significance using the SPSS package (SPSS 17.0) and P value < 0.01 was considered significant.

RESULTS:

There were total 500 deliveries during this. On comparing the indications of cesarean section in two groups (table 1), fetal distress accounted for 112 cases in primigravida while it was an indication for 64 cases in multigravida (p value <0.001). Other indications were comparable in both the groups except for APE and APH. In primigravida, APE was responsible for 4.42% cesarean sections as compared to 0.73% cases in multigravida (p value <0.01). With respect to APH, abruption placenta was an indication in only 1.89% of cases in primigravida whereas in multigravida it lead to cesarean section in 12.73% cases (p value <0.001).

Table 1: Comparison of indication of primary caesarean section in primigravida and multigravida

Indication	Percentage of cases in Primigravida	Percentage of cases in Multigravida	Significant P values
Fetal distress	112	64	<0.001
Eclampsia	18	12	
APH	24	28	
Breech	39	4	
PROM/Oligo	18	24	<0.01
Med presentation	34	11	
FOI	16	11	
Obstructed labor	18	9	
FOP	9	14	<0.001
Precious pregnancy	12	3	
CPD	12	-	<0.01

Table 02: Caesarean section rates in 150 countries categorised according to United Nations geographical data

Region	Births by cesarean section (%)	Range (minimum to maximum) (%)	Coverage of estimates (%)
Africa	7.3	1.4–51.8	92.8
Eastern Africa	3.9	1.5–9.6	96.3
Middle Africa	5.8	3.8–10.0	83.2
Northern Africa	27.8	6.6–51.8	97.4
Southern Africa[c]	-	-	-
Western Africa	3.0	1.4–11.4	100
Asia	19.2	1.7–47.5	97.8
Eastern Asia	34.8	12.5–36.6	100
South-central Asia	11.4	3.6–47.9	100
South-eastern Asia	14.8	1.7–32.0	91.4
Western Asia	26.8	4.8–47.5	87.4
Europe	25.0	13.9–38.1	98.6
Eastern Europe	23.7	15.8–36.3	100
Northern Europe	22.4	14.7–26.6	100
Southern Europe	30.7	13.9–38.1	92.7
Western Europe	24.5	15.6–32.2	100
Latin America and the Caribbean	40.5	5.5–55.6	93.7
Caribbean	27.5	5.5–53.4	81.8
Central America	38.2	16.3–45.2	100
Southern America	42.9	13.3–55.6	91.7
Northern America	32.3	27.1–32.8	100
Oceania	31.1	6.2–33.4	62.3
Australia/New Zealand	32.3	32.4–33.4	100
World total[b]	**18.6**	**1.4–56.4**	**96.1**
Least developed regions	6.0	1.4–41.1	91.8
Less developed regions	20.9	1.7–56.4	96.9
More developed regions	27.2	13.9–38.1	99.2

Ref: Betrán, A. P., Ye, J., Moller, A. B., Zhang, J., Gülmezoglu, A. M., & Torloni, M. R. (2016). The Increasing Trend in Caesarean Section Rates: Global, Regional and National Estimates: 1990-2014. *PloS one*, *11*(2), e0148343. https://doi.org/10.1371/journal.pone.0148343

DISCUSSION:

Greatest emphasis attached to foetal welfare in today's small family norm has changed the delivery practices

in favour of C-Section. There is no empirical evidence for an optimum percentage. What matters most is that all women who need caesarean sections receive them [7]. Safe reduction of the rate of primary caesarean deliveries will require different approaches for each indication. Individualization of the indication and careful evaluation, following standardized guidelines, practice of evidenced-based obstetrics and audits in the institution, can help us limit CSR. From this we can conclude that in primigravida, a good antenatal checkup must be stressed on to prevent incidence of APE and thus lesser women will have to face the operative morbidities [8]. In multigravida, an optimal health status, early diagnosis, timely referral and proper birth spacing by effective implementation of family planning services are the key points to reduce associated maternal morbidities like PPH, disseminated intravascular coagulation and blood transfusions and fetal morbidity and mortality [9, 10].

CONCLUSION:

It is concluding that the current rates of CS, except for the least developed countries, are consistently higher than what is considered medically justifiable. Rate of primary caesarean section in primigravida is increasing as elsewhere and is higher than multigravida. The main finding of this study was an overall increasing trend and unequal coverage of C-sections in Pakistan, with lower rates among the less educated, the poorest socioeconomic stratum and rural areas, and higher rates in women with higher education, women from the richest socioeconomic stratum and from the urban areas.

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