

CAESAREAN SECTION IN A RURAL SET UP: A RETROSPECTIVE STUDY

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Abstract

Background: Globally caesarean section rate is rising. India is also experiencing a dramatic rise in caesarean section. Notedly, there is a lack of studies dealing with understanding the ways and reasons of C-section deliveries becoming a public health issue in today's time in India in rural setup. The objective of the study was to study incidence of caesarean section at rural set up in PAHGMC Baramati Dist Pune. The present hospital based retrospective study carried out at Department of OBGY, PAH Government Medical College, Baramati. The study population was singleton pregnant women who delivered in the hospital during July 2023 to September 2023. A total of 1549 pregnant women delivered during study period. The incidence of caesarean section at rural setup was 42.16%. Majority were delivered by emergency LSCS (67.02%) with indication for LSCS as Previous LSCS (41.04%) among the patients. The present study concludes that incidence of caesarean section is in rise in rural setup.

INTRODUCTION

Globally caesarean section rate is rising. India is also experiencing a dramatic rise in caesarean section. Over past two decades in Maharashtra the caesarean section rate was 35% in private set up and 26% in Government institutions including both urban and rural setup.^[1] There is no general agreement on caesarean section rate. The most accepted recommendation is still the one from WHO, 1985 stating the caesarean section rate should not exceed 15%.^[2] In 2009, WHO revised guidelines still recommending caesarean section rate between 5-15%.^[3] The prevalence of the C-section in India was 8.5% in NFHS-3 while data in NFHS-4 show that it has increased to 17.2%. Thus, almost 9% has increased over 10 years.^[4]

In terms of the global scenario, the previous studies show that in both the developed and developing countries, there is a large increment in the rate of C-section as a country shift from lower to higher Human Development Index (HDI). However, the rates are consistently rising even within the HDI categories. Currently, no internationally accepted classification system for the C-section is available to allow meaningful and relevant comparisons of C-section rates across different facilities, regions, or cities.^[5]

Most maternal deaths in developing countries are preventable through, adequate nutrition, proper health care including access to family planning, the presence of child birth attendant during delivery and emergency obstetric care. One of the biggest challenges is low number of trained health care providers especially in rural areas.^[6] It is acknowledged that when caesarean section access improves in areas where caesarean section access is limited, the neonatal, infant, and maternal mortality rate decrease. Where access is low, the health facilities may also lack the required equipment and proper training. caesarean section procedure often in life saving but it is not without risk.^[7]

It has been requested worldwide that the indication for caesarean section should be recognized to better understand reasons for performing caesarean section. This study was performed in PAHGMC Baramati district, Pune, to study incidence of caesarean section at rural set up.

MATERIALS AND METHODS

The present hospital based retrospective study carried out at Department of OBGY, PAH Government Medical College, Baramati. The study was conducted after obtaining clearance from the Ethical Committee of the institute. The study

population was singleton pregnant women who delivered in the hospital during July 2023 to September 2023. A total of 1549 pregnant women delivered during study period. Patients with pregnancy delivered in hospital by caesarean section was included in the study. Patients with multiple pregnancy, congenital anomaly and not willing to participate were excluded. Relevant clinical history and medical details like age, perinatal history and any coexisting disease was recorded on the Case record form. Detailed analysis with clinical profile was done and results was tabulated. The statistical software namely SPSS 22.0 used for the analysis of the data.

RESULTS

A total of 1549 pregnant women delivered during study period among which 653 women delivered by

caesarean section. The incidence of caesarean section at rural setup was 42.16%.

The table no. 1 describes demographic profile of the patients. Most of the women were in age group 21 to 25 years i.e. 323 (49.46%). Majority of patients was found were multigravida (59.88%) with term gestational age (96.32%). [Table 1]

Out of 653 patients delivered in the hospital by LSCS, majority were delivered by emergency LSCS (67.02%) while elective LSCS was done in 208 (31.85%) patients. [Table 2]

Out of 653 patients delivered by LSCS, majority of the patients had indication for LSCS as Previous LSCS (41.04%) followed by fetal distress (24.04%), breech presentation (9.03%), PIH (4.59%), induction failure (4.4%), Uteroplacental insufficiency (4.4%), oligohydramnios (3.31%) and GDM (2.29%). [Table 3]

Table 1: Demographic profile among cases delivered by caesarean section

Demographic profile		No. of Patients (n=653)	Percentage
Age group (years)	18-20	25	03.83
	21-25	323	49.46
	26-30	277	42.42
	>30	28	04.29
Gravidity	Primi	262	40.12
	Multigravida	391	59.88
Gestational age	Preterm	24	03.68
	Term	629	96.32

Table 2: Distribution of patients based on type of caesarean section

Type of caesarean section	Frequency	Percentage
Elective	208	31.85
Emergency	445	68.15
Total	653	100

Table 3: Distribution of patients based on indication of caesarean section

Indication of caesarean section	Frequency (n=653)	Percentage
Previous LSCS	268	41.04
Fetal Distress	157	24.04
Breech	59	09.03
Induction failure	29	04.44
PIH	30	04.59
Uteroplacental insufficiency	29	04.44
Oligohydramnios	21	03.21
GDM	15	02.29

DISCUSSION

The proportion of caesarean section at the population level is a measure of the level of access to and use of this intervention. It can serve as a guideline for policy-makers and health planners in assessing progress in maternal and infant health and in monitoring emergency obstetric care and resource use. When medically necessary, a caesarean section (CS) can reduce the risk of complications for both the mother and the baby. But it's not without its risks and expensive prices, which can be a problem for countries with low or medium incomes. When it comes to the optimal frequency of CS at the population level, no one seems to agree. Nevertheless, there is growing concern about CS

rates worldwide because a significant portion of CS is deemed to lack medical justification.

In the present study, a total of 1549 pregnant women delivered during study period among which 653 women delivered by caesarean section. The incidence of caesarean section at rural setup was 42.16%.

Sanjit Sarkar et al in a study observed the prevalence of caesarean section (CS) birth rate was 24 per 100 live births and significantly disproportionate concerning public hospitals (19%) and private hospitals (71%). Melissa Neuman et al find that proportion of births delivered by caesarean section was 18% in urban India and 5% in rural India. This finding was much lower than present study.

Most of the women were in age group 21 to 25 years i.e. 323 (49.46%). Majority of patients was found were multigravida (59.88%) with term gestational age (96.32%) Majority were delivered by emergency LSCS (67.02%) with indication for LSCS as Previous LSCS (41.04%) among the patients.

In India C-sections became more prevalent in both urban and in rural areas between 2015 and 16 and 2019-21 across all the regions studied. Prevalence has increased by 11.3% and 4.2% (54% and 50% relative) in urban and rural areas respectively as per NFHS-5 data. The top five states showing higher C-section deliveries in NFHS-5 were Kerala (42.4%), Andhra Pradesh (42.4%), Lakshadweep (31.3%), Jammu and Kashmir (41.7%) and Goa (39.5%), respectively. The bottom five states showing lower C-section deliveries were Meghalaya (8.2%), Bihar (9.7%), Mizoram (10.8%), Assam (18.1%) and Himachal Pradesh (21.0%), respectively.^[1]

In Maharashtra as per NFHS-5 public sector hospitals, the proportion of C-section deliveries were 23.2% in urban areas while 15% in rural areas.^[1] This finding was lower than the present study. Jahnvi Karna et al,^[8] in a study on prevalence of caesarean section observed prevalence of 54% of caesarean section. This was higher than the present study.

It is difficult to explain such high rates on the basis of obstetric/ fetal factors alone. Some increase in the caesarean section rates over the recent years can be explained by rising demand (too push to push, delivery at auspicious time-date). However, biological, environ-mental, nutritional factors and role of obstetricians "playing safe" (i.e., conducting caesarean for even minor complications to avoid litigations) or even for economic gains deserve 'in-depth' analysis through multicentre qualitative and qualitative studies.^[9,10]

A few global studies have mentioned the physician factor contributing to the rise in C-section rates in terms of preferring a C-section because of the doctors' ability to schedule C-section at their convenience, the shorter duration of the delivery by C-section compared to vaginal delivery, inadequate training of the physicians in vaginal delivery and financial incentives.^[11,12] Not many studies have been done to understand how C-section deliveries have become a public health concern in today's time and what to do to reduce the unnecessary C-sections.

In India the rate of caesarean section has crossed the WHO threshold of 15%.^[2] One of the crucial reasons for this growing rate of C-sections is increased in institutional deliveries, rise in the associated medical disorders during pregnancy, rise in the infertility rate among couples. It is also noted that increasing education and literacy among women

led to their apprehension towards normal delivery due to fear of pain. The increase in C-section rate in the study might be because of previous LSCS patients not given trial as non-availability of blood bank in the campus, inadequate full-time anaesthesiologist. So, the patients with previous LSCS were posted for elective LSCS.

CONCLUSION

In the present study, one of the reasons might be, as it is referral centre, patients from PHC and RH are referred to PAHGMC Baramati. The Government should take a primary initiative of raising awareness on the importance of normal deliveries for healthy pregnant mothers which will result in maternal health literacy among women. The present study concludes that incidence of caesarean section is on the rise in rural setup.

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