

Cesarean section rate: much room for reduction

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ABSTRACT

Objective

To determine the cesarean section (CS) rate and to evaluate the factors leading to increased CS rates so that preventive measures can be adopted to safely reduce the CS rate.

Patients and Methods

This descriptive observational study was conducted in gynecology ward of Nawabshah Medical College Hospital, Sindh, Pakistan from November 2008 to January 2009. A total 656 patients who underwent CS were included in the study. After taking informed consent, data were collected regarding sociodemographics, parity, reason of CS, fetal and maternal outcome and booking status. All data were analyzed using SPSS version 15.

Results

Frequency of CS was 41.4%. Out of 656 patients, 286 (43.59%) were in age group of 31-40 years. Majority of them i.e. 525(80%) were unbooked, while 131(19.96%) patients were booked. In 539(82.16%) patients, CS was done in emergency while in 117(17.83%) patients it was done electively. Regarding indications, most common was obstructed labor, which was seen in 160(24.39%) followed by previous CS seen in 99(15%) patients. Regarding maternal morbidity, most common was UTI seen in 49(7.46%), followed by PPH 44(6.70%). Regarding fetal outcome, 553(84.2%) fetus were born alive, 72 (10.97%) were fresh still birth and 129(23.3%) newborns died in early neonatal period.

Conclusion

CS rate is quite high in population and common causes are obstructed labor and repeat CS. (Rawal Med J 2010;35:).

Key words

Cesarean section, obstructed labour, morbidity.

INTRODUCTION

The steadily increasing global rates of CS have become one of the most debated topics in maternity care in the last few years.^{1,2} Paradoxically, this increase has resulted in an increase in maternal and perinatal mortality. CS rate in USA is 29.1%,³ England 21.5%⁴ and in Latin American countries 40%.⁵ The demographic and clinical characteristics of population like maternal age, ethnic origin, previous scars, breech presentations and induction of labor can greatly influence CS rate. A single cut off for defining a high or an ideal CS is very difficult as it may vary in different maternity units according to clinical practices and setup. Recent studies reaffirm earlier WHO recommendations about optimal CS rates. The best outcome of mothers and babies appear to occur with CS rates of 5% to 10%. Rates above 15% seem to do more harm than good.⁶ Leitch stated that indications for CS should be the focus of study that leads to increase cesarean section rate.⁷ The purpose of this study was to determine the CS rate and to evaluate the factors leading to increased CS rates in our setup.

PATIENTS AND METHODS

This descriptive study was conducted in gynecology ward of Nawabshah Medical College Hospital, Sindh, Pakistan from November 2008 to January 2009. Total 1582 patients were delivered in labor ward during this period. Out of these, 656 patients underwent CS. After taking informed consent, patient detail was collected regarding sociodemographic data, parity, reason of CS, fetal and maternal outcome and booking status. All data were analyzed by SPSS version 15.

RESULTS

A total of 1582 deliveries were conducted. Out of these, 926 patients were delivered by normal vaginal delivery and 656 (41.3%) by CS.

Table 1. Sociodemographic data of patients.

Variables	Fr eq ue nc y	pe rc en ta ge
Age <20	18 4	28. 04
20-30	11 4	17. 37
31-40	28 6	43. 59
>40	72	10. 97
Socioeco nomic condition	42 5	64. 78
Poor		
Middle	22 0	33. 53
Upper	11	1.6 7
Parity	13	20.
Primigravida	7	88
Multigrav ida	39 4	60. 0
Grandmul tigravida	12 5	19. 0

Majority of patients i.e. 286(43.59%) who underwent cesarean section were in age group of 31-40 years and 394(60%) patients were multigravida and 125(19%) patients were grand multigravida (Table 1). Regarding socioeconomic condition, 425(64.78%) patients were poor and 220(33.53%) patients belonged to middle class (Table1).

Table 2. Indications of cesarean section.

Indications	F re q ue nc y	Pe rc en ta ge
1. Obstructed labour	16 0	24 .3 9

2. Bad obstetric history	59	8. 99
3. Dystocia/ non progress of labour/malposition	63	9. 60
4. Fetal distress	61	9. 29
5. APH	69	10 .5 1
6. Malpresentation(breech, transverse lie)	41	6. 52
7. Eclampsia	68	10 .3 6
8. Previous CS	99	15
9. Impending rupture	21	3. 20
10. Other (IUGR, chorioamnionitis)	11	1. 67
Pregnancy with fibroid	4	0. 60

Majority of the patients i.e. 525(80%) were unbooked. In 539(82.16%) patients, CS was done in emergency while in 117(17.83%) patients it was done electively.

Table 3. Maternal and fetal morbidity.

Complications	Fr eq ue nc y	Pe rce nta ge
Maternal morbidity	25	3.8
Fever		1
UTI	49	7.4
		6
Wound infection	38	5.7
		9
PPH	44	6.7
		0
Cesarean hysterectomy	3	0.4
		5
Anesthetic complications	8	1.2
		1
Fetal outcome		
Born alive	55	84.
	3	2
Fresh still birth	72	10.
		97
Macerated IUD	31	4.7
		2

Early neonatal death	12	23.
	9	3

Regarding indications, most common was obstructed labor, which is seen in 160(24.39%) followed by previous CS seen in 99(15%) patients (Table 2). Regarding maternal morbidity, most common was UTI seen in 49(7.46%), followed by PPH 44(6.70%) (Table 3). Regarding fetal outcome, 553(84.2%) fetus were born alive, 72 (10.97%) were fresh still birth. All fresh still birth and macerated IUD had absent FHS on admission. All of them were non booked cases and required surgery for maternal indication. 129(23.3%) newborns died in early neonatal period (Table 3). The causes of neonatal death were congenital anomalies, prematurity and birth asphyxia.

DISCUSSION

Cesarean section rate in this study was 41.4%, which is quite high as compared to other countries. CS rates were 18-23% in the United States and United Kingdom.⁸ Main reason of high rate in this study was because of the fact that majority of the pregnant women of the surrounding population were delivered vaginally at home, only those patients are referred to this tertiary care hospital who have one or more risk factors and who already had a trial of labor somewhere else. Thus, CS rate was high in these high risk and non booked cases. Results of this study suggests that the upsurge of CS rates may have its own origin in health care system in which the women live, rather than their positive attitudes towards their CS, as is also indicated by other studies.⁹

In our study, majority of women who underwent CS were in age group of 31-40 years. A study conducted in Taiwan found that after adjusting for maternal indications, health care institution and physician characteristics, there was a significant relationship between

advancing maternal age and an increased likelihood of CS.¹⁰ Obstructed labor was found to be the commonest indication contributing to 24.39% cases. Obstructed labor is still common in this area because of social and cultural factor and lack of awareness. Patients living near by Nawabshah who came to this hospital are poor and family size is large. They do not believe in antenatal care and consider birth a natural process. They bring their ladies to the hospital only when they are seriously ill and insist on vaginal delivery.

Other common indications of CS in this study were previous CS, APH, dystocia and non progress of labor. These results are similar to a previous study.¹¹ Previous CS is one of the principal indications for performing a repeat CS in many studies.¹² A study from Quetta¹³ reported a frequency of repeat CS of 15.57%, which is comparable to our study. Primary CS usually determines the future obstetric course of any women and therefore should be avoided whenever possible. Reason of primary CS must be genuine. Unless there is a solid indication, trial of labor must be given to patient. Trial of scar can be given in singleton pregnancy to decrease the repeat CS, as the risk of uterine rupture is 0.3%.¹⁴

Maternal morbidity was seen in 25.42% cases in this study as compared to 14.5% reported by Yousuf and Baloch.¹³ None of the patients suffered from any life threatening complications. Three patients had cesarean hysterectomy. Two patients had couvillier uterus and third patient went into severe PPH after obstructed labor. All had uneventful postoperative recovery. Generally, CS is considered a relatively safe option for the fetus. However, perinatal morbidity depends upon the reasons for CS and gestational age of the fetus. The perinatal mortality in our unit was quite high as compared with other studies.^{15,16} As compared with international standards, maternal morbidity and perinatal mortality in our setup are quite high because of poverty, lack of awareness, late referral to tertiary care hospitals, poor maternal general health, lack of adequate health care facilities and non affordability of required drugs.

CONCLUSION AND RECOMMENDATIONS

CS rate was quite high in our study. Important causes were obstructed labor and repeat CS. Every attempt should be made to reduce the primary CS. Repeat CS can be avoided by giving trial of labor. By proper antenatal evaluation and timely referral to tertiary care hospitals, majority of complications can be reduced. Women must be counseled about the importance of antenatal care.

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