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Research Article

**FACTORS RESPONSIBLE FOR CESAREAN SECTION AND
MATERNAL MORBIDITY IN TERTIARY CARE HOSPITAL****Dr. Fouzia Rahim^{1*}, Dr. Farah Naz² and Dr. Anila Mahmood³**¹MBBS, MS, Department of OBS and Gynae, Isra University Hospital Hyderabad²MBBS, FCPS Department of OBS and Gynae, Liaquat University Hospital Hyderabad³MBBS, MS, senior registrar Gynae department of LUMHS**Received:** 30 December 2016 **Accepted:** 19 February 2017 **Published:** 28 February 2017**Abstract:**

OBJECTIVES: To determine the frequency of responsible factors for C-section and maternal complications after cesarean section at tertiary care hospital.

MATERIAL AND METHODS: This cross-sectional study was carried out in the gynecology & obstetric department of Liaquat University and medical Health science Hyderabad/Jamshoro and Isra university hospital Hyderabad. Study duration was 1 year from 2015 to 2016. All the women underwent C-section were studied. All the data regarding maternal, parity, gestational age, obstetric background whether booked or unbooked, elective or emergency cesarean section and maternal complications were recorded on self-designed Performa.

RESULTS: In this study total 684 women were selected those were underwent c-section, Mostly women 54.8% were found with age group of 31-40 years. Majority of women were unbooked 67.5%. Most common causes of the c-section was previous c-section in 37.28% of the women and APH in 16.08% of the women, following by CPD and male presentation, failure progress of the labour, fetal distress and eclampsia as; 12.57%, 12.42%, 7.89% and 8.62% respectively, while women with presentations of multiple factors were 5.11%. Difficult intubation was found in only 0.7%. Cesarean hysterectomy was done in 1.16%. Postpartum haemorrhage was found in 9.94% of the women, 4.38% women were note with wound infection.

CONCLUSION: We concluded that previous c-section and APH were the commonest responsible factor for c-section, and mostly women with previous c-section were unbooked. Postpartum haemorrhage was the most common complication.

Key Words: Cesarean section, factors, maternal complication

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INTRODUCTION:

Incidence of the caesarean section continuously is increasing through the world, while incidence is vary according to populations and regions [1,2]. World health organization stated that there is no additional health benefits associated with cesarean section rate above 10-15% [7]. It is reported from the causes C-section, there is current understanding regarding right to self-determination, that may be exercised in nearly unlimited fashions through the ones adult life. Female of the developed nations are requesting nowadays for elective c-section without surgical and the medical indications as preferred mode of deliveries [4,5]. This increase rate is not likely due to a risky alteration in the obstetrical risks but rather expansions of indication's range for C-section. Indeed, 84% of the C-sections in Brazil carried out before labour onset, most likely for non-medical causes [1,6]. C-section has been linked to multiple risks to the health of women, and may be the modified risks for maternal death, but remains controversial [7,8]. The prevalence of the severe maternal morbidities is significantly high in women those undergoing emergency C-section as compare to those undergoing elective one, complications also may higher in women undergoing repeat C-section and in older women [9-11]. In the past 30 years the rate of C-section has steadily increased from 5% to more than 20% for many avoidable and unavoidable indications. It may save maternal and fetal life, but is also known to have the typical complications of major surgeries: haemorrhage, infections, thromboembolism and anesthetic complications, sometimes leading to death of mothers. Factors rising the risks of ending up in c-section and developing the risk for complications associated to the delivery have been examined in the literature, different studies showed different factors caused of C-section, and it's related maternal complications.^{1,5,9} This study has been conducted to evaluate the frequency of responsible factors for C-section and maternal complications.

MATERIAL AND METHODS:

This cross-sectional study was carried out in the gynecology & obstetric department of Liaquat University and medical Health science Hyderabad/Jamshoro and Isra university hospital Hyderabad. Study duration was 1 year from 2015 to 2016. All the women who underwent C-section were studied regarding causes of C-section and maternal complication. Both booked and un-booked women

were included in the study. All the women with chronic hepatitis, ruptured uterus and those were not agreeing to participate in the study were excluded. Before surgery all the selected women were underwent clinical examination, ultrasound and routine laboratory investigations. All the data regarding the age of the mother, parity, gestational age, obstetric background whether booked or unbooked, elective or emergency C- section and maternal complications was recorded on self-designed proforma. Data was analyzed in the SPSS version 16. Mean and standard deviation were calculated for quantitative variable, while frequency and percentage were calculated for categorical variables.

RESULTS:

In this study total 684 women were selected those underwent c-section, Majority of the women 54.8% were found with age group of 31-40 years, followed by 17.8% women were with age group of 20-30 years, while 17.4% women were less than 20 years and 9.9% were more than 40 years of the age. Mostly women were unbooked 67.5% and remaining 32.5% were booked, majority of the women 62.0% were uneducated and 38.0% women were educated following by some were with low level of education, some metric passed and very few were graduate. Almost equally women were found according to the residential status as; 51.2% women were from rural areas and 48.85 were urban women. **TABLE:1**

In this study most common causes of the c-section were previous c-section in 37.28% of the women and APH in 16.08% of the women, following by CPD and malpresentation, non-progress of the labour, fetal distress and eclampsia with percentage of 12.57%, 12.42%, 7.89% and 8.62%, while women with presentations of multiple factors were 5.11%. **TABLE:2**

Intraoperative anesthetic complications were observed in very few patients. Anesthesia related complications were difficult intubation which was found in only 0.7% of the women and out of them 2 gets hypoxic and remaining were on ventilator for 24 hours and then recovered. Cesarean hysterectomy was done in 1.16% of the study women. Postpartum haemorrhage was found in 9.94% of the women, 4.38% women were note with wound infection. **TABLE: 3**

TABLE 1: DEMOGRAPHIC CHARACTERISTICS OF WOMEN n= N=684

Demographic characteristics	frequency	Percentage
AGE		
< 20 Years	119	17.4%
20-30 Years	122	17.8%
31-40 Years	375	54.8%
>41 Years	68	09.9%
Booking status		
Booked	222	32.5%
Unbooked	462	67.5%
Residential status		
Rural	350	51.2%
Urban	334	48.8%
Educational status		
Educated	260	38.0%
Uneducated	424	62.0%
Parity		
Primigravida	167	24.41%
Multipara	445	65.0%
Grand multipara	72	10.52%

TABLE.2: Causative factors for Caesarean section N=(684)

Causative factors	Frequency	%
Previous C-section	255	37.28%
APH	110	16.08%
CPD & malpresentation	86	12.57%
Non progress of labour	85	12.42%
Fetal distress	54	7.89%
Eclampsia	59	8.62%
Others (multiple causes)	35	5.11%

TABLE 3: MATERNAL COMPLICATIONS N=(684)

Complications	Frequency	%
Difficulty in intubation	05	0.7%
PPH	68	9.94%
Wound sepsis	30	4.38%
Cesarean hysterectomy	08	1.16%

DISCUSSION:

Over the past decades, the unprecedented and steady rise in the rates of CS have led to increased research, debate and concern among healthcare professionals, governments, policy-makers, scientists and clinicians [12,13]. In this study total 684 women were selected those underwent c-section, Mostly women 54.8% were found with age group of 31-40 years, following by 17.8% women were with age group of 20-30 years, while 17.4% women were less than 20 years and 9.9% were more than 40 years of the age. Majority of the women 62.0% were uneducated and 38.05 women were educated following by some were with low level of education, some metric passed and very few were graduate. In comparison of this study, results of study conducted by Mariyappa Narayanaswamy *et al* [14] reported that majority (54.5%) of their patients were with age group of 20 - 25 years and most of them (61.3%) had finished their primary school.

In this study mostly women were unbooked 67.5% and remaining 32.5% were booked. Almost equally women were found according to the residential status as; 51.2% women were from rural areas and 48.85 were urban women. Similarly in the study of Abebe FE *et al* [15] reported that rural women were 49.2% and urban women were 49.8%. In the favor of this study in a national report conducted by Baloch S *et al*¹⁶ reported that mostly women 73% were unbooked while 27% were booked.

In this study most common causes of the c-section were previous c-section in 37.28% of the women and APH in 16.085 of the women, followed by CPD and male presentation, failure progress of the labour, fetal distress and eclampsia with percentage of 12.57%, 12.42%, 7.89% and 8.62%, while women with presentations of multiple factors were 5.11%. Similarly in a Study carried out by Fernandez alba JJ *et al* [17] reported that overweight women found with raised risk of c-section caused by previous c-section, obstructed labour, unprogressive, failure induction and the fetal distress. These risk factors were even greater in the obese female. On other hand Abebe FE *et al* [15] reported that obstructed labor, fetal distress and malpresentations were commonest responsible factors for c-section with percentage of 30.7%, 15.9% and 13.4% respectively. Another study conducted by Karami K *et al* [18] reported that commonest causes for c-section were as; previous cesareans in 31% women, election cesarean in 20%, meconium in 11% and fetal breech presentation in 8%) of the women while in 2006 causes were found as; labour non progression in 34% women, CPD in 31% of women and breech presentation in 12% respectively. On other hand Sheikh L *et al* [19] in the study justified that un-progression of labour and sub

optimal CTG were commonest factors for the emergency C-sections, while breech presentations big leading cause of elective C-sections.

In our study intraoperative anesthetic complications were observed in very few patients. Anesthesia related complications were difficult intubation which was found in only 0.7% of the women and out of them 2 gets hypoxic and remaining were on ventilator for 24 hours and then recovered. Cesarean hysterectomy was done in 1.16% of the study women. Postpartum haemorrhage was found in 9.94% of the women, 4.38% women were note with wound infection. In the comparison of this study other studies also stated that in cases having cesarean deliveries are exposed to the potential anesthetic complications [20] and 82% of anesthesia-related maternal mortality. The standard of anesthesia must be looked into. Regional anesthesia is much safer in most cases. Moreover two to four fold increased mortality rate is associated with cesarean delivery [21] Infection, blood loss, Uterine or utero cervical lacerations, injury to other organs [22], trauma to the infant about two fold increased risk of hospitalization, greater risk of emergent hysterectomy and a 2.4-fold increased risk of abruption in a subsequent pregnancy following cesarean delivery are risks and complications related to cesarean deliveries.

CONCLUSION:

We concluded that previous c-section and APH were the commonest responsible factor for c-section, and mostly women with previous c-section were unbooked. Postpartum haemorrhage was the most common complication. Cesarean section rate may decrease by good antenatal care and good counseling of the women, good antenatal facilities should be provided specially for poor women in rural areas.

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