Original Article

Factors Associated with Repeat Caesarean Sections in Tertiary Care Hospital

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Abstract

Objective: To evaluate the causative factors responsible for repeat caesarean sections among patients presented at Zaid Women Hospital, CMCH Larkana.

Methodology: The descriptive cross-sectional study was conducted in department of Obstetrics and Gynecology, Shaikh Zaid Women Hospital, CMCH Larkana from March 2018 to August 2018. Women with a prior caesarean section's history and undergoing repeat C-sections, aged >18 years old, gestation age > 28 weeks and of either parity were included. A complete clinical examination and routine required laboratory investigations were done. Repeat C-sections were performed by experienced and skilled gynecologists with at least five years of experience. All the women were assessed for the causative factor of repeated c-sections. A structured study form was used to record all demographic information, including causal factors. The SPSS version was used for the analysis of the data.

Results: A total of 114 women who underwent repeated caesarean sections were studied, their average age was 27.11±5.66 years and their mean gestational age was 36.43+2.49 weeks. Cephalopelvic disproportion, short Interval, mal presentation, bad obstetrical history, lower segment fibroids, congenital uterine anomalies, septate uterus, bicornuate uterus and didelphys uterus were significant factors of repeated caesarean section. The approximated causative factors were statistically insignificant according to residence and booking status (p->0.05).

Conclusion: As per study conclusion the cephalopelvic disproportion, short Interval, mal presentation, bad obstetrical history, lower segment fibroids, congenital uterine anomalies, septate uterus, bicornuate uterus and didelphys uterus were observed to the factors responsible for repeated cesarean sections. Maternal health care providers should be trained to provide respectful and individualized care to the mother and the neonate, thus ensuring the safety of both during birth.

Key Words: Repeated, Caesarean Section, Indications

Cite this article as: Mahmood A, Lakho R, Lakho N, Shoaibunisa, Kumari P. Factors Associated with Repeat Caesarean Sections in Tertiary Care Hospital. J Soc Obstet Gynaecol Pak. 2022; 12(3):257-261.

Introduction

A Caesarean section was the first obstetric procedure used to save the lives of mothers and newborns from the dangers of pregnancy and other birth-related issues in the late nineteenth century.[1] Although unnecessary C-sections might have a negative effect on the health of the mother and the newborn.[1] It has become a worldwide public health concern that the number of caesarean sections (CS) are increasing. Estimates of 10-15% for CS were recommended by the World Health Organization (WHO).[2] Unneeded CS costs families and healthcare systems resources. "Whenever a woman elects to undergo a caesarean section during her first pregnancy, additional caesarean births may occur during future pregnancies."[3,4] Therefore, the CS should only be used when considered necessary because with every additional CS, the chance of severe maternal and fetal morbidity more increases. Following a first caesarean, vaginal birth increases the likelihood of subsequent vaginal births and confirms the pelvic capacity for vaginal birth, reducing the need for a repeat caesarean and its associated morbidities.[5] Repeat

Authorship Contribution: [1,3]Substantial contributions to the conception or design of the work; or the acquisition, [2]Drafting the work or revising it critically for important intellectual content, [4]Final approval of the version to be published, [5]analysis or interpretation of data for the work,

Funding Source: none
Conflict of Interest: none

Received: Mar 15, 2022
Accepted: Aug 28, 2022

caesarean births are linked to morbid adherent placenta, adhesions of pelvis, urinary bladder injuries, and substantially greater hysterectomy chances.[5,6] Neonates who are delivered by many repeat caesarean sections seem to be more likely to have breathing problems and need to be admitted to a neonatal ICU.[3]

The level of religious observance, the preferred quantity of children, as well as feelings of control over one's health all affect a woman's decision between a labour trail after a caesarean and an elective repeat caesarean delivery.[7] There are several causes has been suggested in the literature. As in a study reported that the repeat caesarean sections are linked to the number of antenatal care, and those who had more visits had a higher risk, and they assumed that the increased incidence of repeat caesarean sections amongst females who receive more prenatal care could be a sign that such women are more at risk for pregnancy and this observation is probably due to the fact that doctors who visit pregnant women most frequently seem to be more likely to persuade the female to choose their desired delivery method, especially when the same expert will help the birth. [8,9] On the other hand, maternal requests for a CD have lately been one of the main reasons for the surgical route of birth because to the concentration on women's involvement in their medical decisions. [10,11] The risk of bladder or bowel injury during surgery, as well as the difficulty of performing surgery due to adhesions, increases as each woman has more caesarean deliveries. A second pregnancy could also be challenging to conceive, and other placental morbidities may occur. [12] The repeat C-section rate is rising in developing countries, including Pakistan. Numerous studies have been conducted on the factors associated with C-sections, and a small number of international studies have discovered factors linked to repeat C-sections but not at the local level. Therefore, this study has been done to assess the causative factors responsible for repeat caesarean section among patients presented at Zaid Women Hospital CMCH Larkana.

Methodology

This descriptive cross-sectional study was done at the department of gynaecology and obstetrics at Shaikh Zaid Women Hospital, CMCH Larkana. The study lasted six months, from March to August of 2018. After CPSP approved the proposal, the study was completed. Non probability consecutive sampling technique was used. All females aged >18 years old, with a history of previous caesarean sections and undergoing repeat c-sections, gestation age >28 weeks, and of either parity were included. All the primiparous women had multiple foetuses as per the ultrasound report, and those who refused to participate in the study were excluded. A complete clinical examination and routinely required laboratory investigations were done, including a fresh ultrasound for fetal wellbeing. Following the receipt of written informed consent, the repeat C-sections were performed by experienced and skilled gynecologists with at least five years of experience. All of the women were evaluated for risk factors for repeated C-sections, such as cephalopelvic disproportion, a history of short interval 2 years, malpresentation, a history of more than 50% pregnancy loss, lower segment uterine fibroids, a history of myomectomy for fibroids, uterine anomalies, or maternal wishes, and so on. A structured study form was used to record all demographic information, including causal factors. The SPSS version was used for the analysis of the data.

Results

A total of 114 cases were enrolled to study the causative factors of repeat C-sections. The women's average age was 27.11±5.66 years, and their mean gestational age was 36.43±2.49 weeks. Most of the women 95(83.3%) were un-booked and 95(83.3%) women were booked. Out of all 80(70.2%) women were urban residents, while 34(29.8%) were rural residents. Overweight women were 54(47.4%) and 60(52.6%) of the women had normal BMI. (Table I)

Table I: Demographic characteristics of the patients (n=114)

Variables		Frequency (%)
Age groups	≤30 Years	104(91.2%)
	>30 Years	10(8.8%)
Gestational age	≤36 Weeks	64(56.1%)
	>36 Weeks	50(43.9%)
Booking status	Booked	19(16.7%)
	Un-booked	95(83.3%)
Residence	Rural	34(29.8%)
	Urban	80(70.2%)
Overweight	Yes	54(47.4%)
	No	60(52.6%)

Short Interval and arcuate uterus were observed to be the most common causative factors of repeat C-section. Among 51.8% and 51.8% of the patients respectively, followed by bicornuate uterus, didelphys uterus, bad obstetrical history and the Malpresentation among 21(18.4%), 21(18.4%), 16(14%) and 12(10.5%) of the patients respectively, while other least common factors were myomectomy, lower segment fibroids, congenital

uterine anomalies and septate uterus as shown in table II

Furthermore, the approximated causative factors were statistically insignificant according to residence and booking status (p->0.05). Tables III & IV

Table II: Factors associated with repeated caesarean sections. (n=114)

Factors	Frequency (%)
Cephalopelvic Disproportion	31(27.2%)
Short Interval	59(51.8%)
Mal Presentation	12(10.5%)
Bad Obstetrical History	16(14%)
Myomectomy	4(3.5%)
Lower Segment Fibroids	4(3.5%)
Congenital Uterine anomalies	7(6.1%)
Septate uterus	10(8.8%)
Bicornuate Uterus	21(18.4%)
Didelphys Uterus	21(18.4%)
Arcuate Uterus	59(51.8%)

Table III: Factor associated with repeated caesarean section according to Residence. (n=114)

Factors	Residence		P-value
	Urban	Rural	
Cephalopelvic Disproportion	12	19	0.076
Short Interval	24	35	
Mal Presentation	03	09	
Bad Obstetrical History	07	09	
Myomectomy	02	02	
Lower Segment Fibroids	03	01	
Congenital Uterine anomalies	04	03	
Septate uterus	07	03	
Bicornuate Uterus	12	09	
Didelphys Uterus	13	08	
Arcuate Uterus	01	58	

Table IV: Factor associated with repeated caesarean section according to Booking status. (n=114)

Factors	Booking status		P-value
	Booked	Un-booked	
Cephalopelvic Disproportion	22	9	0.088
Short Interval	48	11	
Mal Presentation	08	04	
Bad Obstetrical History	11	05	
Myomectomy	03	01	
Lower Segment Fibroids	04	00	
Congenital Uterine anomalies	06	01	
Septate uterus	06	04	
Bicornuate Uterus	18	03	
Didelphys Uterus	16	05	
Arcuate Uterus	53	06	

Discussion

Globally, the proportion of vaginal births after previous caesarean deliveries is declining.[13,14] Contrarily, the prevalence of caesarean sections is constantly increasing, and repeat caesarean sections account for the majority of the total CD rates.[14] The present study was done to assess the causative factors responsible for repeat caesarean sections, and enrolled 114 women undergoing repeat C-sections who had a history of prior C-sections. In this study, the average age of the women was 27.11±5.66 years, and most of the women 104(91.2%) aged ≤30 years, while the mean gestational age was 36.43±2.49 weeks. Similarly, Gholami A et al[10] reported that the average age of the women was 29.95 ± 4.94 years and most of the women had gestational age <37 weeks. On the other hand, in the study by Khan FK et al[15] reported that the patients mean age was 29.03 ± 7.96 years those underwent repeated C-sections and most of the women 64.67% were aged between 26 to 30 years. Although most communities still advise waiting until 39 weeks to schedule elective repeated caesarean births, until clinically recommended, some clinicians are actually using prior delivery dates, including 37 or 38 weeks.[16]

In this study the short interval and arcuate uterus were observed to be the most common causative factors of repeat C-section among 51.8% and 51.8% of the patients respectively, followed by bicornuate uterus, didelphys uterus, bad obstetrical history and the malpresentation among 21(18.4%), 21(18.4%), 16(14%) and 12(10.5%) of the patients respectively, while other least common factors were myomectomy, lower segment fibroids, congenital uterine anomalies and septate uterus. In the comparison of this study, Zargar S et al[17] reported that the majority of the repeated C-sections 40.6% were elective, and other indications were including 15.5% fetal distress (15.5%), 11.4% pre-eclampsia, 11.4% dystocia, and 7.8% was the breech (7.8%). On the other hand, generally, it is stated that the high rates of induction of labor, advancing maternal age, intra operative morbidity, scar dehiscence, and a decline in the practice of surgical vaginal birth are also believed to be contributing factors to the rise in the number of repeated caesarean deliveries.[16] On the other hand, it has been stated that the primary elective abdominal births, either out of choice or because they are deemed valuable for certain reasons, are another significant element. Women are more likely to elect elective repeat caesarean procedures due to an increased risk of

uterine rupture and a better understanding of the risks of giving birth near a previous scar.[15] Although Mascarello KC et al. (2004) discovered that women's ages, frequency of antenatal visits, and deliveries performed by healthcare professionals outside of public health-care systems were all associated with repeat caesarean sections, No more particular studies have been found in the literature regarding factors responsible for repeated C-sections. Although it has been stated that higher recommendations for repeat caesareans are a procedure that is becoming extremely popular and that a significant risk of surgical and anaesthetic problems from recurrent caesarean sections is placed on women, particularly in the Middle East and, more specifically, in Saudi Arabia, where large families are desired for cultural and social reasons.[15] On the other hand, women should have been kept informed of the general risks associated with surgical delivery and frequently occurring pregnancies.[18] Given these risk variables, many medical professionals advise sterilization for women who have had two or more caesarean sections because of the possibility of rupture of the uterus and other consequences. [18] In addition to giving women who prefer vaginal birth a choice, such a method of birth after a caesarean section may benefit the women's health by avoiding extensive abdominal surgery, having lower rates of blood transfusions and hysterectomies, having a shorter recovery duration, and avoiding unnecessary all the other complications associated with caesarean sections when compared to patients who have a repetitive procedure.[4,19,20] However, it has been suggested that the hazards of multiple caesarean procedures should be properly discussed with women during the antenatal period, and they should be provided bilateral tubal ligation following the third or fourth c-section.[21] The results of this study were inconsistent with those of previous studies, and it also had a number of limitations, so it was unable to draw any conclusive evidence from it. Therefore, more comprehensive studies should be conducted to prove the findings.

Conclusion

As per the study conclusion, cephalopelvic disproportion, short Interval, malpresentation, bad obstetrical history and arcuate uterus were observed to be the commonest approximated factors of repeated caesarean section. Repeat caesarean sections may raise a patient's risk of obstetric problems, which could affect her ability to conceive in the future. To emphasise the advantages of vaginal delivery for both the mother and the child, effective modifications in obstetric care must be made. To ensure the safety of both the mother and the newborn during birth, maternal health care workers should get special training on how to treat the mother and the newborn with regard and individual care. Excellent public policies that guarantee the continuity of care during pregnancy and delivery are also crucial and may aid in lowering the rate of caesarean sections, either during the initial pregnancy or subsequent ones.

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