

Comparison of Maternal Complication in Elective Vs. Emergency Caesarean Section

R ASHRAF A GUL A BASHIR A TAJAMMAL

Department of Obstetrics & Gynaecology, Lahore General Hospital, Lahore
Correspondence to Dr. Razia Ashraf, Assistant Professor (0300-8447906)

Objective: To compare the maternal complication in elective vs emergency caesarean section. **Design:** Prospective study. **Place and duration of study:** Department of Obstetrics & Gynaecology, Lahore General Hospital, Lahore **Patients and methods:** The study was conducted from August 2004 to August 2005. During this period all women underwent elective or emergency caesarean section included. **Results:** A total of 920 caesarean sections were performed, 770 were emergency and 150 were elective. Intraoperative and postoperative complications were 76, 70 in emergency and 6 in elective group. Postoperative complications were 120, 110 in emergency and 10 in elective cases. **Conclusion:** In emergency caesarean section maternal mortality and morbidity is high.

Key words: Caesarean section, emergency, elective

Caesarean section is defined as "The operation performed to deliver the baby after the age of viability (24 weeks) through an abdominal incision"¹. The caesarean procedure came from a set of Roman laws Lex Caesaer, which in 715BC mandated surgical removal of an unborn fetus upon death of the mother². The history of the operation is fascinating with a wide range of isolated cases being documented with various techniques being investigated to try to lower the enormous risks of death due to haemorrhage and sepsis³.

Caesarean section rates are increasing worldwide and the quoted rate is 19% in England and Canada, 20% in Scotland, 22% in United States and 12-14% in some of the European countries. Women are three to four times more likely to have a caesarean birth now than they were 30 years ago⁴. The incidence of caesarean section in tertiary care hospitals of Pakistan is very high 30-35% because of very high number of unbooked cases landing in emergency after having been mismanaged outside¹.

Overall rate of caesarean section has been risen because of widening of indication. Fetal distress has been the most frequent indication for caesarean section in last fifteen years. Decision to perform caesarean section should be taken in consideration of present clinical situation and future consequences of abdominal delivery⁵.

Caesarean rates varied widely across complication types and complication specific rates varied widely among hospitals. Although the presence of pregnancy complications upon hospital admission comprised the strongest factor affecting first time caesarean use among labouring women; the importance and interdependence of these clinical conditions has yet to be incorporated into commonly used models of caesarean rate comparison⁶. Average maternal morbidity and mortality rates after caesarean section are very small. Factors contributing to high rate of postoperative morbidity are: prior internal monitoring, prolonged rupture of membranes, unsuccessful prior effort at vaginal delivery, haemorrhage, uterine rupture and other obstetrics problems. Data shows that

delivery by caesarean is associated with 5-fold increase in maternal mortality compared with vaginal delivery after the exclusion of severe antenatal complications and medical disorders.

Caesarean associated maternal and fetal morbidity and mortality were brought down due to improved operative techniques and facilities. But with emergency procedures risks of maternal and perinatal morbidity and mortality increases many folds. An effort must be made to reduce the incidence and complications of emergency caesarean section⁷.

Maternal and methods

The study is conducted in Department of Obstetrics and Gynaecology of Lahore General Hospital Unit II. It is complicated in one years Aug 2004 - Aug 2005.

Inclusion criteria

During period of one year women under going elective and emergency caesarean sections will be included in study admitted through emergency and OPD.

Exclusion criteria

I will exclude:

1. Cases of rupture uterus.
2. Patient undergoing caesarean section with previous of any abdominal surgery.
3. Patient undergoing caesarean section with concurred medical illness e.g. diabetes mellitus, pre-eclampsia, eclampsia, epilepsy cardiac diseases etc.

Data will be collected from history, physical examination, investigations, written in the file of the selected case. Patient will be followed till she will be discharged from hospital. Any complication occurring in postnatal period during hospital stay will be noted. Study consisted on two group. First group consisted of patients under went emergency caesarean section. 2nd group consisted of patients under went elective caesarean section.

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Results:

Total numbers of birth during study period were 3832 out of which 920 under went caesarean section which makes 24% Caesarean section rate in our unit. Out of 920 Caesarean section done 770 were emergency and 150 were elective as in Table I. Age of patients ranged from 18-40 years and parity ranged from nullparious to gravida 10. as shown in Table II.

Table I: Emergency versus elective caesarean section (n=920)

Type	=n	%age
Emergency	770	83.69
Elective	150	16.30
Total	920	

Table II: Parity wise distribution (n=920)

Parity	=n	% age
Null Parious	228	24.78
P ₁ -P ₂	378	41.08
P ₃ -P ₄	160	17.39
P ₆ -P ₁₀	154	16.73

The common indication in emergency caesarean section was fetal distress 184 repeat caesarean section in 150, Failed Progress of labour in 101, mal presentation in 91 obstructed labour in 57 and hypertensive disorder in 40 as shown in Table III

In Elective caesarean section group repeat caesarean section 98, malpresentation 28, cephalo pelvic disproportion in 15, APH in 12 and PIH in 7 patients as shown in Table IV.

Table III: Indication of emergency caesarean section (n=770)

Indication	=n	% age
Fetal distress	284	36.88
Repeat Caesarean section	190	24.67
Failed Progress	108	14.02
Mal Presentation	91	11.81
Obstructed Labour	57	7.40
Hypertensive disorder	40	5.19
Miscellaneous		

Table IV: Indication of Elective caesarean section (n=150)

Indication	=n	% age
Repeat Caesarean Section	98	65.33
Mal Presentation	18	12
CPD	15	10
APH	12	8
Hypertensive disorder	7	4.66

The incision used was Pfannensteil incision on 96% of patient only 4% patient in emergency group was opened by mid line incision because they already had mid line Scar.

Total 76 patients out of 920 had complications surgical and anesthesia complication. 70 belong to emergency group and only 6 belong to elective group. Intra-operative complications are show in Table V.

575 patient received blood transfusion either intra-operative or post-operatively, 475 were emergency and 100 were elective group.

Total 120 patient suffered from post-operative complications and out of 120, 110 were of emergency group and 10 were of elective group.

Hospital stay was prolong in emergency caesarean section as 7-10 days in elective group it was 4-7 days.

Table V: Intra-operative complication

Complication	Emergency group	Elective group	Total
Haemorrhage	30	4	34
Extension of uterine tear	24	0	24
Caesarean hysterectomy	7	1	8
Bladder injury	2	0	2
Difficult intubation	5	1	6
Cardiac arrest	2	0	2
Total	70	6	76

Table VI: Post-operative complication

Complication	Emergency group	Elective group	Total
PPH	25	0	27
Paralytic iliac	11	0	11
Postop pyrexia	42	4	46
UTI	13	2	15
Wound infection	19	2	21
DVT	0	0	0
VVF	0	0	0
Total	110	10	120

Discussion:

The caesarean section rate has increased throughout the world from last few years Caesarean section rate in the study was 24% which is comparable Rehan's⁸ study. In western world most of the caesarean section are performed due to prior caesarean section, labour dystocia, fetal distress and breach presentation.

In this study in elective group repeat caesarean section, mal presentation, cephalo-pelvic disproportion, ante-partum hamorrhage and hypertension disorder. In case of emergency group fetal distress repeat caesarean section, failed progress of labour, mal presentation and obstructed labour were indications of patients that are comparable to Ruby study⁹.

In this study 83% of operations were done in emergency and 17 % were elective. It is comparable with local studies where it was 80% and 20% respectively. The number of emergency cases in any hospital depends upon catchments area, type of obstetric population, ratio between book and unbooked cases and referral role of hospital.

Our 80% cases were unbooked and most of them are anemic and likely to have more complication than in booked cases. In emergency unbooked patients presents

with prolong labour obstructed labour, prolong rupture of membranes with repeated examination unhygienic condition. All the factors lead to high number of intra operative and post-operative complication. Intra operative complication rate is high in emergency cases then in elective cases as in Table V. Same is the case with post-operative complication as in Table VI. The patients in emergency had more blood transfusion as compared to elective cases.

Conclusion:

This study shown a high number of emergency caesarean section associated with increased maternal mortality and morbidity. Adequate education and mass media can play an effective role to educate ordinary women about health problems. Proper sterilization also prevent high complication rate.

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