

Comparative study of maternal and fetal outcome in emergency and elective caesarean section

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Abstract

Background: In India, the overall rate for caesarean deliveries is 24.4%. It impacts on fetus as well as long term and short term out comes. **Aim:** To study intra and post-operative maternal and fetal complications in emergency and elective caesarean sections **Materials and Methods:** It is a comparative Hospital based study on 100 cases each of emergency caesarean sections (Group-A) and elective sections (Group-B). **Results:** Intra operative hemorrhages 37% in group-A, Group-B 14% ($p<0.001$). Intra operative transfusions 35% in group-A, Group-B 10% ($p<0.001$). Uterine incision extension 25% in Group-A, group-B 10% ($p<0.001$). Post-operative blood transfusions 30% in Group-A, Group-B 10% ($p<0.001$). PPH 28% Group-A, group-B 14% ($p<0.001$). Post-operative hospital stays 20% Group-A, group-B 5% ($p<0.001$). Meconium amniotic fluid 24% in Group-A, group-B 5% ($p<0.001$). NICU admissions 20% in Group-A, group-B 10% ($p<0.001$) respectively. **Conclusions:** Emergency caesarean sections is associated with more maternal and fetal complications than elective.

Key Words: C section.

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INTRODUCTION

Caesarean section is done where vaginal delivery is considered either inappropriate or dangerous to either the mother or baby. Caesarean section is defined as the birth of fetus through incision in the abdominal wall and uterine wall after 20 weeks of gestational age. With small family norm in recent times, however, women in increasing numbers have been requesting elective as their

own choice. The Indian Council of medical research in 33 tertiary care institutions noted that average CS rates increased from 21.8% in 1993-1994 to 25.4% in 1998-1999.¹The rate of caesarean section in urban educated population in Chennai is 45%. In population based cross sectional study the public, charitable and private sector hospitals had CS rates of 20%, 38%, and 47% respectively.² Caesarean deliveries now account for approximately one third of all deliveries and represent the most common surgical procedure performed in United States. ³Thus there is a significant need to review the future maternal complications following CS. The impact on fetus as well as long term and short term out comes. The CS rate in the US was 31.8% in 2007. It is predicted that this rate may have been surpassed in 2009. Between 2002 and 2006, another increase was noted to reach the rate of 30.5%. Thus, from 1996 to 2007, the CS rate rose 53%⁴, the highest reported in the US. The operation is now performed with increasing impurity, thanks largely to antibiotics, improved anesthesia and availability of blood transfusion. It is natural therefore that the

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indications for this operation are continuously being extended. This is a comparative study of maternal and fetal outcome in emergency and elective caesarean sections done at Nilofer Hospital during the period from November 2011 to July 2013. In this study the results of maternal and fetal outcome of emergency and elective sections are compared.

AIMS AND OBJECTIVES

1. To study maternal and fetal outcome in emergency and elective caesarean sections.
2. To study intra operative maternal and fetal complications in emergency and elective caesarean sections.
3. To study post-operative maternal and fetal complications in emergency and elective caesarean sections.

MATERIALS AND METHODS

This hospital based comparative study in 100 cases of emergency caesarean sections and 100 cases of elective caesarean sections were compared in a period from November 2011 to July 2013. This was conducted at Dept. of Obstetrics and gynaecology.

Inclusion Criteria

- Pregnant mothers admitted through OPD
- Pregnant mothers admitted through emergency ward
- Primipara
- Multipara
- Pregnant mothers of any age group

Exclusion Criteria

- Classical Caesarean section
- Patients with h/o previous myomectomy.

Patients undergoing Emergency Caesarean Section were grouped under Group A. Those undergoing elective CS were grouped under Group B. Name, age, address, IP No., LMP, EDD, admitting ward were, obstetric history, and indication for surgery, date of operation, date of discharge were noted.

Based on the indications, patients were decided for either emergency or elective LSCS. Some patients who were planned for elective LSCS ended up in undergoing Emergency LSCS (e.g. those 2 previous LSCS in labour). The following preoperative care was given.

Pre Operative Care

- The woman planned for Caesarean section were admitted and evaluated by obstetrician and anaesthetist.
- Informed consent of pregnant woman was taken.
- All patients were counseled about a clinical situation, the benefits and risks of Caesarean delivery as compared to vaginal birth.

- Haemoglobin was checked.
- Sedation was given at bed time.
- Pubic hair was clipped.
- Oral intake was stopped at least 8 hours before surgery.
- Compatible blood was reserved.
- Bladder was emptied by Foley's catheterization.
- Fetal heart sounds were documented prior to surgery.
- Gross fetal anomalies were excluded by ultrasound.
- Inj. Metaclopramide 10 mg IV given to increase tone of lower oesophageal sphincter as well as to reduce gastric contents.
- Neonatologist was available.
- Prophylactic Antibiotics were given.

Patients were given either spinal or general anesthesia.

Position of the Patient: The women were placed in a 15 degree left lateral tilt to avoid aorta caval compression.

Techniques of Caesarean Section: Lower Segment Caesarean Section was performed as described previously.

Intraoperative Complications: Such as haemorrhage, bladder injury, uterine angle extension, Atonicity of uterus, Caesarean hysterectomy, intra operative blood transfusions were noted. Post operative care was given as follows.

Post Operative Care Zero POD:

- Adequate pain relief
- Monitoring urine output, BP, pulse rate
- Watch for Bleeding for vagina
- Uterine fundus was palpated frequently by palpation
- Prophylactic antibiotics were given for 5 days.
- **IV fluids:** 3 Litres adequate for 24 hours after surgery
- **Breast care:** Breast feeding was initiated as early as possible

First POD

- Oral fluids were allowed after the returning of bowel sounds
- **Bladder care:** Foley's catheter was removed by 12 hours postoperatively
- Early ambulation
- Repeat Hb% 24 hours after surgery

Second POD

- Light solid of patient's choice.

Third POD

- Aseptic wound dressing

Fifth POD or Sixth POD

- Abdominal skin stitches were removed.

Postoperative complications like PPH, blood transfusions, respiratory infections, urinary tract infections, wound infections, burst abdomen were noted. Post operative hospital stay was noted. Neonatal Complications like soft tissue injury, respiratory distress, and meconium stained amniotic fluid, low Apgar at 5 minutes, NICU admissions, stillbirth, early neonatal deaths were noted. Babies were followed for one week of hospital stay.

Following were evaluated in study

Inoperative Complications: Anaesthesia Complications-Difficulty in Intubation, Haemorrhage, Bladder Injury, Bowel Injury, Extension of Uterine incision, Atonicity, Caesarean hysterectomy, Intraoperative transfusion and Maternal death

Postoperative Complications: PPH, Blood transfusion, Respiratory Infections, Burst abdomen, Urinary Tract Infection, Wound Infection and Postoperative hospital stay

Foetal Complications: Soft tissue injury, Meconium stained Amniotic Fluid, NICU admissions, Still birth, Low Apgar score at 5 min, Respiratory distress and Early neonatal deaths

All the analyses were carried out using SPSS version 18.0. P value of <0.05 was considered as statistically significant.

RESULTS

Table 1: Demographic distribution in study

Age	Emergency LSCS	Elective LSCS
<20 years	4	2
20-30 years	78	90
>30 years	18	8
Order of pregnancy		
Primi	34	12
G ₂ -G ₃	44	58
G ₄ -G ₅	22	30
Mode of Admissions		
Through OPD	20%	80%
On emergency basis	70%	30%

Majority of the LSCS in both the groups (AandB) were done in the age group between 20-30 years (78% and 90% respectively). Fewer were in the age group <20 years (4% and 2% respectively). More CS was done in multi gravidas (G₂-G₃44% and 58% respectively in groups A and B) than in Primis. In group A, more patients were admitted on an Emergency basis (70%), while in group B, more were admitted through OPD.

Table 2: Indications of Caesarean Sections (n = 100)

Indications	Emergency LSCS	Elective LSCS
Obstructed labor	3 (3%)	0
1 previous CS	12 (12%)	24 (24%)
2 previous CS	15 (15%)	40 (40%)
PROM	12 (12%)	0
Malpresentation	10 (10%)	13 (13%)
Preeclampsia	10 (10%)	3 (3%)
CPD	0	10 (10%)
IUGR	5 (5%)	0
APH	5 (5%)	0
Failure to progress	10 (10%)	0
Eclampsia	5 (5%)	0
Fetal Distress	8 (8%)	0
Failed Induction	5 (5%)	0
Total	100	100

The most common indication in emergency caesarean section is 2 previous LSCS in labor (15%), 1 previous LSCS in labor (12%), PROM (12%), Failure to progress (10%), Malpresentation (like breech in labor) (10%), preeclampsia (10%), fetal distress (8%). IUGR, APH, Eclampsia, Failed induction (5%). The most common indication in elective caesarean section is Repeat section (2 previous CS 40%, 1 previous CS 24%), Malpresentation (13%), CPD (10%).

Table 3: Maternal Complications observed in study

Intraoperative Maternal Complications	Emergency CS	Elective CS	p value
Difficulty in intubation	8 (8%)	2 (2%)	0.05158
Hemorrhage	37 (37%)	14 (14%)	0.000
Bladder Injury	3 (3%)	0 (0%)	0.080
Bowel Injury	0	0	
Extension of uterine incision	25 (25%)	10 (10%)	0.005
Atomic Uterus	12 (12%)	4 (4%)	0.037
Caesarean Hysterectomy	2 (2%)	0	0.155
Intraoperative blood transfusions	35 (35%)	10 (10%)	0.000
Postoperative Maternal Complications			
PPH	28 (28%)	14 (14%)	0.015
Blood Transfusion	30 (30%)	10 (10%)	0.000
Respiratory Infections	14 (14%)	6 (6%)	0.059
Burst abdomen	2 (2%)	0	0.155
UTI	20 (20%)	8 (8%)	0.0144
Wound Infection	18 (18%)	6 (6%)	0.0090
Postoperative hospital stay>1 week	20 (20%)	5 (5%)	0.001

A higher rate of Intraoperative complications was found in Group A than in Group B. Hemorrhage was more in Group A (37%) than in Group B (14%) (p = 0.000). Need of Intraoperative transfusions in group A was more (35%) than in group B (10%) (p = 0.000). Extension of uterine incision in group A was more in Group A (25%) than in group B (10%) (p = 0.005). Atonic uterus was more in group A (12%) than in group B (4%) (p =

0.037). Difficulty in intubation was more in Group A (8 %) than in Group B (2%) ($p = 0.05$). Bladder injury was more in group A (3%) than in group b (0%) ($p = 0.08$). Need for post operative blood transfusion was found higher in group A (30%) than in group B (10 %) ($p = 0.000$). Postoperative hospital stay more than >1 week was more in group A (20%) than group B (5%) ($p=0.001$).

Table 4: Fetal Complications

Fetal Complications	Emergency CS	Elective CS	p value
Soft tissue injury	6 (6%)	2 (2%)	0.149
Respiratory distress	10 (10%)	2 (2%)	0.0172
Meconium stained Amniotic Fluid	24 (24%)	4 (4%)	0.000
NICU Admission	20 (20%)	10 (10%)	0.047
Stillbirth	6 (6%)	0	0.0128
Early neonatal death	4 (4%)	0	0.040
Low Apgar at 5 minutes	5 (5%)	1 (1%)	0.097

The most common neonatal complication in groups A and B is Meconium stained Amniotic Fluid (24% and 4% respectively) ($p = 0.000$), followed by NICU admissions (20% and 10% respectively) ($p = 0.047$). Out of 6 stillbirths, 3 were IUDs. Stillbirths were higher in group A (6%) than in group B (0%). Respiratory distress is more common with emergency CS (10%) than with elective CS (2%) ($p=0.017$). Early neonatal deaths were higher in Group A (4%) than in group B (0%) ($p = 0.040$). Low Apgar at 5 minutes was 5 % and 1% in groups A and B respectively.

DISCUSSIONS

From 1970 to 2007, the caesarean delivery rate in the United States rose from 4.5 % of all deliveries to 31.8%. The Indian council of medical research in 33 tertiary care institutions noted that average CS rates increased from 21.8% in 1993-1994 to 25.4% in 1998-1999.² The rate of cesarean section in urban educated population in Chennai is 45%. In medical colleges and teaching hospitals in India the overall rate for caesarean deliveries is 34.4%. In population based cross sectional study the public, charitable and private sector hospitals had CS rates of 20%, 38%, and 47% respectively.² In our study from (November 2011 – July 2013) in department of Obstetrics and Gynaecology at Nilofer Hospital, a Caesarean birthrate was 40%. The difference between the rate at our hospital and the national rate can be accounted for by the fact that- our hospital has a neonatal tertiary care available for medical and surgical emergencies, which makes it a referral centre for various high risk pregnancies. Our primary aim was to compare and analyze maternal, and fetal complications of Emergency and elective sections. In our study, most of the Caesarean

sections were in the age group of 20-30 years (78% and 90% in emergency and elective CS). Similar reports were observed in a study conducted by Asifa Ghazi *et al*⁵ (80% and 92% emergency and elective CS) done in 2012. Similar results were found in a study done by DA Vaughan *et al*⁶- 10.5% in <20 years, 77.9% at 20-34 years and 9.9% at 35-39 years. In our study, more caesarean sections were in multigravidas (22% and 29% emergency and elective CS) than in primi gravidas (17% and 6% emergency and elective CS). Lulu Al Nuiam *et al*⁷ in a study done in 1996 found more CS in multigravidas (51% and 67.8% in emergency and elective CS in primi gravidas (25.6% and 8.5% in emergency and elective CS respectively). Most of the booked cases with regular antenatal check-up were taken up for elective CS through OPD basis. Those that were booked, but did not attend regular antenatal check-ups and turned up in labour at the emergency ward, and unbooked cases in labour with appropriate indications were taken up for emergency CS. There was a statistically significant relationship between antenatal clinic attendance and the type of CS. In our study, 80% of the elective cases were admitted through OPD, while 20% were through emergency ward and 70% of the emergency CS were admitted through emergency ward, while 30% were admitted through OPD ($p=0.000$). In our study the most common indication for emergency CS was 2 previous LSCS in labour (15%). Other common indications for 1 previous CS in labour (12%), PROM (12%), failure to progress (10%), preeclampsia (10%), malpresentation (10%), fetal distress (8%). Similar reports were noted by Asifa Ghazi *et al* 2012- 2 previous LSCS (14%) 1 previous CS (4%), failure to progress (2%), malpresentation (8%), PROM (12%), preeclampsia + Eclampsia (10%). In our study, the most common indication for elective LSCS was 2 previous CS (40%). Other common indications were 1 previous CS (24%), malpresentations (13%), CPD (10%), and IUGR (10%). Similar reports were observed in a study done by Asifa Ghazi *et al* in the same study – 2 previous CS (40%), 1 previous CS (20%), CPD (8%), and malpresentation (6%). The proportion of emergency cases in any hospital depends upon a number of factors e.g., catchment area, type of obstetric population, ratio between booked and unbooked cases and, the referral of the hospital. There are other general factors like as well contributing to this like socioeconomic conditions, literacy rate, frequency and quality of antenatal care, timely referral by ANMs. Most of the cases with history of repeat section presented to labor room in labor or with draining p/v. They did not have regular antenatal check-ups. Our institution is tertiary care institution and therefore in our study most common indication was repeat section in labor. Caesarean section rate can be reduced by trial labour in selected

cases with 60-80% success rate while proper monitoring of labour, use of photograph, and timely use of oxytocin for augmentation can reduce caesarean section done for failed progress of labour. More **Intraoperative complications** were found in emergency CS than in elective CS in our study. Haemorrhage was more common in emergency CS (37%) than in elective CS (14%) with significant p value (0.000). Haemorrhage was noted in 58% and 4% patients in emergency and elective caesarean section groups respectively in a study conducted by Mehnaz Rares *et al*⁸ in 2006-2007. In a study conducted at Lahore, haemorrhage was found in 14.8% and 4.3% in emergency and elective CS respectively. Increased haemorrhage in emergency CS may be due to stretching of the lower segment and the impaction of the presenting part into the pelvic cavity thereby making the operation bloody. In our study haemorrhage was estimated on subjective basis. In our study, extension of uterine incision was found more in emergency CS (25%) than in elective CS (10%). This is statistically significant ($p=0.005$). 16% and 0% were found in emergency CS and elective CS respectively in a study conducted by Mehnaz Rares *et al*⁸ in 2006-2007. 56% and 6% were found in emergency CS and elective CS respectively in a study conducted by Asifa Ghazi *et al*⁵ in 2012. More patients in Emergency CS (35%) needed Intraoperative transfusions than in Elective CS (10%) in our study, which was statistically significant ($p=0.000$). In a study conducted by Asifa Ghazi *et al*⁵ in 2012, need for Intraoperative transfusions were 92% and 20% in emergency and elective CS respectively. Atonic uterus was found in 12% and 4% in emergency CS and elective CS in our study, and it was statistically significant ($p=0.037$). In a study conducted by Mehnaz Rares *et al*⁸ in 2006-2007, atonic uterus was found in 14% and 4% in emergency and elective CS respectively. In a study conducted by Asifa Ghazi *et al*⁵ in 2012, 36% and 8% were found in elective and emergency respectively. 13.6% of emergency CS patients were found to have had atonic uterus in a study conducted by Jindal Promila *et al*⁹ in 2008. In our study, difficulty in intubation was found in 8% and 2% in emergency and elective CS respectively. In a study conducted by Asifa Ghazi *et al*⁵ in 2012, difficult intubation was found in 14% and 0% in emergency and elective CS respectively. In a study conducted by Mehnaz Rares *et al*⁸ in 2006-2007, 2% and 0% of cases in emergency and elective CS respectively had difficult intubation. Bladder injury occurred in 3% and 0% of cases in emergency and elective CS in our study. In a study conducted by Mehnaz Rares *et al*⁸ in 2006-2007, 18% and 0% cases in emergency CS and elective CS had bladder injury. In a study conducted by Asifa Ghazi *et al*⁵ in 2012, bladder

injury was found in 8% and 0% of in emergency and elective CS respectively. 4.6% of emergency CS patients were found to have had bladder injury in a study conducted by Jindal Promila *et al*⁹ in 2008. Caesarean hysterectomy was done in 2% and 0% in emergency and elective CS respectively in our study. 8.6% of emergency CS patients had caesarean hysterectomy in a study conducted by Jindal Promila *et al*⁹ in 2008. In a study conducted by Asifa Ghazi *et al*⁵ in 2012, caesarean hysterectomy was done in 16% and 2% emergency and elective CS respectively. **Postoperative complications** were more in emergency CS than in elective CS in our study. Postoperative blood transfusions were necessary in 30% and 10% of emergency and elective CS respectively in our study, which was statistically significant ($p=0.000$). In a study conducted by Mehnaz Rares *et al*⁸ in 2006-2007, 64% and 8% of emergency and elective CS respectively needed postoperative blood transfusions. 62% and 16% emergency and elective CS respectively needed transfusions in a study conducted by Asifa Ghazi *et al*⁵ in 2012. In our study most of the patients need blood operatively and some patients preoperatively with moderate anaemia became severe anaemic due to intraoperative blood loss and post partum haemorrhage. PPH in our study occurred in 28% and 14% emergency and elective CS respectively, and it was statistically significant ($p=0.015$). In a study conducted by Mehnaz Rares *et al*⁸ in 2006-2007, 24% and 6% emergency and elective CS respectively developed PPH. In a study conducted by Asifa Ghazi *et al*⁵ in 2012, 18% and 4% of emergency and elective CS respectively developed PPH. Maaik A.P.C. van Ham *et al*¹⁰ in a study conducted between 1983-1992 found PPH in 4% of emergency CS cases. Statistically significant Urinary Tract Infections occurred in 20% and 8% of emergency and elective CS respectively in our study ($p=0.014$). In a study conducted by Asifa Ghazi *et al*⁵ in 2012, UTI occurred in 66% and 18% emergency and elective CS respectively. In a study conducted by Mehnaz Rares *et al*⁸ in 2006-2007, 24% and 8% emergency and elective CS respectively developed UTI. Lulu Al Nuiam *et al* in a study done in 1996 found that 15.5% and 7.6% of emergency CS and elective CS developed UTI. Maaik A.P.C. van Ham *et al*¹⁰ in a study conducted between 1983-1992 found UTI in 3% of emergency CS. SAMIA HASSAN *et al* in 2006 in a study found UTI in 11.2% and 2.1% in emergency and elective CS respectively. In our study, statistically 18% and 6% of emergency and elective CS respectively developed wound infection ($p=0.009$). In a study conducted by Mehnaz Rares *et al*⁸ in 2006-2007, 8% and 4% emergency and elective CS respectively developed wound infection. SAMIA HASSAN *et al* in 2006 in a study found wound infection in

16.6% and 4.3% in emergency and elective CS respectively. Lulu Al Nuaim *et al*⁷ in a study done in 1996 found that 6.5% and 6.2% of emergency CS and elective CS developed wound infection. In a study conducted by Asifa Ghazi *et al*⁵ in 2012, wound infection occurred in 22% and 8% emergency and elective CS respectively. Respiratory infections occurred in 14% and 6% of emergency and elective CS respectively in our study. In a study conducted by Asifa Ghazi *et al*⁵ in 2012, respiratory infections occurred in 40% and 14% emergency and elective CS respectively. In a study conducted by MehnazRaees *et al*⁸ in 2006-2007, 18% and 2% emergency and elective CS respectively developed respiratory infection. Samia Hassan *et al*¹¹ in a study in 2006 found 9.2% and 4.3% of emergency and elective CS cases respectively developing respiratory infections. In our study, 2% and 0% in emergency and elective CS cases respectively developed burst abdomen. In a study conducted by Asifa Ghazi *et al*⁵ in 2012, burst abdomen occurred in 2% and 0% emergency and elective CS respectively. It is common for emergency operations to be undertaken when the patient has been in labour, membranes have been ruptured over a period of time, and several vaginal examinations have been performed, there by introducing potent sources of postoperative sepsis. Postoperative Hospital stay in 20% of the emergency CS were longer than 1 week, while in 5% of elective CS was longer than 1 week in our study. In a study conducted by Asifa Ghazi *et al* in 2012, 62% and 14% of emergency and elective CS respectively had a prolonged postoperative hospital stay. The incidence of postoperative complications may be higher in emergency than in elective CS, these may prolong the patient's stay in hospital, as was found in our study. Unless it is absolutely necessary, patient's stay in hospital should be as short as possible, since prolonged stay only increases their misery and financial burden. Foetal Complications were greater in emergency CS than elective CS in our study. Meconium stained amniotic fluid (MSAF) occurred more in emergency CS (24%) than in elective CS (4%) ($p < 0.000$). NICU admissions were 20% and 10% of emergency and elective CS respectively in our study, which is statistically significant ($p = 0.047$). 24.2% of emergency CS babies had NICU admission in a study conducted by Jindal Promila *et al*⁹ in 2008. Samia Hassan *et al*¹¹ in a study in 2006 observed 14.9% and 4.3% cases in emergency CS and elective CS respectively. Most of the NICU admissions are due to respiratory distress, prematurity, perinatal asphyxia. Low Apgar scores at 5 minutes of birth were 5% and 1% in emergency and elective CS respectively in our study. Lulu Al Nuaim *et al*⁷ in a study done in 1996 found low Apgar at 5 minutes in 8.5% and 2.9% in emergency and elective CS

respectively. Respiratory distress at birth was found in 10% and 2% of emergency and elective CS respectively in our study. In a study done by Muhammad Ali *et al* in 2004, 6% and 1.3% of emergency and elective CS were found with respiratory distress. Still births were more in emergency CS (6%) than in elective CS (0%) in our study, which were statistically significant ($p = 0.012$). 4.1% of emergency CS babies were stillbirths in a study conducted by Jindal Promila *et al*⁹ in 2008. Still births 3 were IUD due to abruption and remaining 3 babies were died due to asphyxia due to obstructed labour in which presenting part was jammed in the pelvic cavity causing difficulty in the delivery of the baby. Statistically significant early neonatal deaths were 4% and 0% in emergency and elective CS respectively in our study ($p = 0.04$), 3.3% of emergency CS babies were neonatal deaths in a study conducted by Jindal Promila *et al* in 2008. In our study neonatal deaths were due to respiratory distress due to meconium aspiration syndrome. In our study, soft tissue injury to baby was 6% and 2% in emergency and elective CS respectively. Sometimes during delivery of breech and preterm babies when there is less amniotic fluid caused minimal soft tissue injury.

CONCLUSION

From this study done, it can be concluded that emergency Caesarean section is associated with more maternal and foetal complications than elective caesarean section. More maternal complications such as haemorrhage, extension of uterine incision, atonic uterus, need for intraoperative transfusions, PPH, wound infection, prolonged postoperative hospital stay occur in emergency caesarean section than in elective caesarean section. Foetal complications occur more in emergency caesarean section than in elective caesarean section. As much as is practical, everything points to the advantages that can be derived from a planned CS as compared to one that is undertaken as an emergency. Antenatal care should be directed to effect-planned CS operations, so as to reduce the problems associated with emergency CS. Every effort should be made in the antenatal clinic to pickup the cases that are likely to result in difficult labor, such as large babies, small pelvis, previous obstetric history etc. That may indicate the need for CS, in order to reduce the incidence of failed labor that will end up in emergency CS. It is possible; however, that this approach may neither increase nor decrease our CS rates. This study shows that with regard to maternal and foetal outcome, it is possible to opt for elective caesarean over emergency caesarean section.

REFERENCES

1. Rao BK. Global aspects of a rising caesarean section rate. In Women's health today: perspectives on current research and clinical practice. The proceedings of the XIV world congress of obstetrics and gynecology, Montreal 1994:59-64.
2. S. Sreevidya, B.W.C. Sathiyasekaran: High caesarean rates in Madras (India): a population-based cross sectional study: BJOG. 2003 Feb; 110(2):106-11.
3. World Health Organization. Appropriate technology for birth. Lancet. 1985;2:436-7
4. Rotas, M.A., Haberman, S., Levгур, M. Cesarean scar ectopic pregnancies: etiology, diagnosis, and management. Obstet Gynecol. 2006; 107:1373-1381.
5. Asifa ghazi, Farhakarim, Ayesha Muhammad Hussain, TehminaAli,ShaziaJabbar, maternal morbidity in elective versus emergency at tertiary hospital in J of ayub med col Abbott 2012:24(1)
6. D A Vaughan J Cleary published online on June 12 2013DOI:10.1111/1471-0528.12311(261-68).
7. Lulu Al-Nuaim et al-outcome of emergency and elective caesarian sections Annals of Saudi Medicine volume 16 No 61996.
8. MehnaazRaees, Yasmeen S, Jabeen S, Utman N, Karim R J Post Grad Inst2012;27(1)55-62Maternal morbidity associated with emergency versus elective caesarian section.
9. Jindal Promila et al: comparative study of maternal and fetal outcome in elective and emergency CS in Indian OBG 2008.
10. Maike A P C Van Hama et alPete W.J, Van Dongena Jan Mulderh-Maternal consequences of caesarean "European Journal of caesarian sections (CS) performed between 1983-92 in the University Hospital.
11. Samia Hassan, MisbahKausarJavaid, Sadia Tariq.EmergencyCesarean section; comparative analysis of problems encountered between patients of elective Cesarean section and patient for whom elective Cesarean section was planned but ended up in emergency Professional Med J Apr - Jun 2008; 15(2):211-2.Services Hospital, Lahore.

