

MATERNAL AND FETAL OUTCOME IN BOOKED AND UNBOOKED PATIENTS UNDERGOING EMERGENCY LSCS

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ABSTRACT: BACKGROUND: Caesarean section is the most commonly done Obstetric surgery and the outcome of surgery differs depending on various factors. Maternal and Fetal morbidity effects the quality of life, effect on maternal and foetal morbidity depends on proper follow up during antenatal period. **PURPOSE:** This study was under taken to find out the difference in maternal and fetal outcome between booked cases with proper antenatal follow up and un-booked cases. **METHODOLOGY:** This is a comparative study conducted at Rural Medical College in Telangana over a period of one year. Various parameters of Maternal Morbidity, Neonatal Morbidity, and Mortality were compared in both the groups. Comparison was done by using chi square test. And p value <0.05 was considered to be statistically significant. **RESULTS:** 389 patients were studied who underwent emergency LSCS during year 2014 in our rural medical college 190 were un-booked cases and 199 were booked cases, Indications for LSCS were similar in both the groups most common being one previous LSCS next being fetal distress. Abruption was the indication in 11 cases of un-booked group were as only one case in booked group. Post-partum haemorrhage and other post-operative complications were significantly higher in un-booked group. Perinatal mortality was more in un-booked cases. Low birth weight and need for NICU admission, perinatal morbidity was high in un-booked group. **CONCLUSION:** During our study period it was observed that booked cases had less maternal morbidity, perinatal morbidity and mortality when compared to the un-booked cases.

KEYWORDS: Caesarean section, maternal mortality, post-partum haemorrhage, low birth weight.

INTRODUCTION: The procedure of caesarean section has evolved since ages from being done as post mortem surgery to save the unborn child to present times where it is done for multifactorial reasons,¹ commonest indication for caesarean delivery is one previous LSCS. It is one of the most commonly performed operations today.²

Present obstetricians encounter increasing number of post caesarean pregnancy because of rapid rise in primary caesarean sections. Any risk factor along with previous caesarean section and also if the criteria for VBAC is not fulfilled leads to a repeat caesarean section.

In spite of all attempts to deliver the pregnancy by elective caesarean section many times emergency caesarean section may have to be resorted for fetal or maternal salvage.³ The incidence of severe maternal morbidity is significantly higher among women undergoing emergency LSCS than women undergoing elective one.⁴ In emergency cases there is lack of all the facilities, availability of trained staff, all the criteria may not be fulfilled, and both the maternal and fetal complications are more common.⁵

Prenatal care aims to identify high risk pregnancy and to prevent and manage problems and factors that adversely affect the health of the mother and infant. International organisations have indicated poor utilisation of antenatal care as one of the contributing factor for the high obstetric mortality and morbidity, Gomez-olmedo,⁶ Barros,⁷ Delvaux,⁸ and Swyer,⁹ have reported association

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between provision of prenatal care improved pregnancy outcome. In an observational study of home births in Rural India 52.6% women developed complications during labor and puerperium.¹⁰ The incidence of severe maternal morbidity is significantly higher among women under-going emergency LSCS than those undergoing elective LSCS.⁴

This study was conducted to compare maternal morbidity, neonatal outcome in booked and unbooked cases undergoing emergency LSCS.

METHODS: This is a cross sectional comparative study conducted in OBG department KIIMS Narketpally from 1st Dec. to 31st Nov. 2014 on 389 pregnant mothers undergoing emergency LSCS.

Inclusion Criteria:

1. All women in labour irrespective of age, parity, gestational age.
2. All women undergoing emergency LSCS either booked or un-booked.

Exclusion Criteria:

1. All pregnant mothers admitted and who undergo normal vaginal delivery.
2. All pregnant mother who undergo elective caesarean section.

Detailed history and physical examination of the selected patients were recorded on predesigned proforma. Antenatal booking records were reviewed, cases were divided into 2 groups, group A consisting of booked cases and group B consisting of un-booked cases. Booked patients were those who carried documented evidence of more than or equal to four antenatal visits and last visit in the preceding month. Those who did not fulfil the criteria were labelled as un-booked cases

All complications that occurred during labour and post natal hospital stay were recorded. Important morbidities were major obstetric haemorrhage, uterine rupture, pospartum haemorrhage, fever, Sepsis.

New born weight was recorded, APGAR scoring done, NICU admission done where ever necessary after paediatric examination, each new born was followed till discharge from the hospital. Collected data entered in the proforma were analysed, significance of difference of various morbidities in the two group were calculated by pearsons chi square test.

RESULTS: Total 389 patients who underwent emergency LSCS were enrolled in the study, out of which 199(51.1%) were booked cases and 190(48.8%) were unbooked cases. Indications for caesarean section were studied in both the groups. In many cases there were more than one indications i.e., one previous LSCS with fetal distress, CPD with PROM etc however the appropriate indication was taken into consideration and studied in both the groups, there were similar indications in both the groups except for abruption which was observed in 11 cases of unbooked group and only one case in booked group and this was statistically significant ($p < 0.05$).

Booked	Un-booked
17 (8.5%)	44 (23.1%)

Table 1: Postpartum Haemorrhage

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Post-Partum Haemorrhage was recorded in 44 cases (23.1%) in un-booked group, and 17 cases (8.5%) in booked group.

Booked n=199		Un-booked n= 190	
Bilateral uterine artery ligation	1	Bilateral uterine artery ligation	1
B - lynch sutures	1	B- lynch sutures	2
Hysterectomy Indication placenta increta	1	Placental bed sutures	2
Medical management (Prostaglandins)	14	Medical management (Prostaglandins)	39
Total	17(8.5%)	Total	44(23.1%)

Table 2: Management of PPH

Complication	Booked N = 199	Un-booked N = 190	P value
Adhesions	15(7.5%)	25(13.1%)	>0.05
Thinned out lower uterine segment	20(10.05%)	39(20.5%)	P<0.05
Bladder adhesions	3(1.5%)	10(5.2%)	P<0.05
Scar dehiscence	7(3.5%)	11(5.7%)	P>0.05
Bladder advancement	7(3.5%)	9(4.73%)	P>0.05
Extension of incision	2(1.05%)	2(1.05%)	P>0.05

Table 3: Intraoperative Complications

Thinned out lower segment was seen in (10.05%) in booked cases and (20.5%) un-booked cases (p<.05) Bladder Adhesions were seen in 1.5% of booked cases and 5.2% of un-booked cases (p<.05). Other intraoperative complications seen were scar dehiscence, bladder advancement and extension of incision.

Post-operative Complications (Table-4): 18.5% of patient required blood transfusion in Booked group as compared to 41.57% of cases required blood transfusion in un booked group which was found to be statistically significant (p <.001). Fever was more commonly associated with un booked group (16.8%) as compared to booked group (11.5%) 21.6% of cases required prolonged catheterisation in booked group as compared to 37.3% of cases requiring prolonged catheterisation in un-booked group which was found to be statistically significant (p<001) 16.08% cases required prolonged hospital stay in booked group as compared to 57.8% Cases requiring prolonged hospital stay in un-booked group which was statistically significant (p<001). Wound infection was 16.8% in un-booked group as compared to 6.5% in booked group. And prolonged hospital stay, were significantly more in un-booked cases as compared to booked group.

Complications	Booked N = 199	Un-booked N = 190	P value
Fever	23(11.5%)	32(16.8%)	P>0.05
Blood transfusion	37(18.5%)	79(41.57%)	P<0.001
Prolonged cathetrisation	43(21.6%)	71(37.3%)	P<0.001
Injury to adjacent organ	Nil	01(0.5%)	

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Prolonged hospital stay	32(16.08%)	110(57.8%)	P<0.001
Wound infection	13(6.5%)	32(16.8%)	P<0.05%

Table 4: Postoperative Complications

Parameters	Booked N = 199	Un-booked N = 190	P value
Nicu admission	60(30.1%)	115(60.5%)	P<0.001
Iud	Nil	1(0.52%)	P>0.05
Perinatal mortality	2	10(5.2%)	P<0.05
Birth wt. <2.5kg	21(10.5)	60(31.5%)	P<0.001
<1.5kg	1(0.05%)	11(31.5)	P<0.01
Referred to higher center	1(0.5%)	8(4.21%)	P<0.01
Apgar score(<7-9)	4(2.01%)	20(10.5%)	P<0.001

Table 5: Fetal Outcome was analysed in both the groups

NICU Admission: 60.5% of babies required NICU admission in un-booked group and 30.1% of babies required NICU admission in booked group.

Perinatal mortality was more in un-booked (5.2%) when compared to booked group. (1%)

Birth-weight: Birth Wt. of less than 2.5kgs was observed in 31.5% of un-booked cases and 10.5% of booked cases.

Referral: 4.5% of babies in un-booked group needed higher centre referral for further management as compared to 0.5% of babies in booked group.

APGAR score at 5 min was less than (8) in 10.5% of babies of un-booked group and 2% of babies of booked group.

DISCUSSION: In this study it was observed that maternal morbidity was lower in the booked group as compared to un-booked group. Different studies have used a variety of conditions to describe obstetric morbidity and intra operative post-operative complications.¹⁰

Our institution being a referral centre, receive a lot of cases from primary health centers. But the indication for emergency LSCS did not differ much in both the groups as the booked cases were also reluctant for prior admission and came in a state needing emergency LSCS. Abruption as indication for emergency LSCS was observed more in unbooked group than in booked group all presented in a critical condition needing transfusion of blood and blood products.

A Nigerian researcher has reported that 82.5% cases of severe acute maternal morbidity in un-booked patients.¹¹

The commonest maternal morbidity observed was major haemorrhage. More in unbooked cases (23.1%) compared to booked cases (8.5%). Study conducted by Rifat et al,¹² showed higher incidence of haemorrhage in unbooked case as compared to booked cases. A study of Geller S E et al has found that <4 antenatal visits was a risk factor for PPH.¹³

Severe preeclampsia and eclampsia cases were more in unbooked group as compared to booked group, similar observation was done in Taiwan study by Liu C M.¹⁴

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Post-partum fever was seen in booked and un-booked cases but wound infection, prolonged catheterisation, prolonged hospital stay was significantly more in un-booked group. This is correlating with a Nigerian study by Dare in which post-partum complications more in un-booked patients (71.2)%.¹⁵

One un-booked patient with history of previous one caesarean section reported in active labour and had intra uterine death with uterine rupture. Ebieghe¹⁶ has also reported lack of antenatal care a risk factor for uterine rupture.¹⁶ We had one booked case needing obstetric hysterectomy. Indication being placenta increta but in this case the perinatal outcome was better.

Frequency of NICU admission and low birth weight was significantly higher in babies of un-booked mothers. Lack of antenatal care was associated with higher incidence of birth asphyxia in a study in Hyderabad.¹⁷

In our study birth weight of <2.5 kg was seen in 31.5% of unbooked cases and 10.5% of booked cases, similar observations were made by Riffat Jaleel¹⁷ in Karachi showing birth weight of <2.5kg in 21.2% of unbooked cases and 12.9% of booked group.

Perinatal mortality was 5.2% in un-booked group and 1% in booked group, in accordance with Pakistan study presented by Riffat et al,¹² where the perinatal mortality was 10.8% in un-booked cases and 1.8% in booked cases.

Lack of prenatal care was found associated with increased perinatal morbidity and mortality in an American study.¹⁸ Jamal et al in Islamabad have reported high neonatal morbidity and mortality in mothers with poor antenatal care.¹⁹ Similar observations were made by other authors Adenkale,²⁰ Ekwempu,²¹ Treacy,²² and Sanchez-Nunico,²³ where poor perinatal outcome was associated with lack of antenatal care.

CONCLUSION: The present study showed that poor utilisation of antenatal care is associated with increased maternal morbidity and perinatal morbidity and mortality. Proper antenatal care may not prevent the need for emergency caesarean section but definitely better maternal and neonatal outcome is observed.

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