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Original Research Article

A prospective comparative study between perinatal outcomes in elective and emergency

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Abstract:

Background & Method: The aim of this study is to study a prospective comparative study between perinatal outcomes in elective and emergency. Pregnant women attending Obstetrics and gynecology department in Kamla Raja Hospital Gwalior, who fulfill the inclusion criteria and exclusion criteria were considered for study. A detailed history was taken which included patient's education occupation, menstrual history, obstetric history, previous obstetric events were asses in detail, past history and surgical history and personal history taken. A thorough general physical and obstetric examination was done. The patients were divided into those undergoing elective caesarean section and those undergoing emergency caesarean section.

Result: Transient Tachypnea of Newborn was seen in 7 babies born during emergency LSCS and 2 babies born during elective LSCS. It was not statistically significant with $p < 0.170$. Hypoxic-Ischemic Encephalopathy was seen in 16 babies born during emergency LSCS. It was statistically significant with $p < 0.001$

Conclusion: The rate of caesarean section is very high in a tertiary care center. The outcome of emergency and elective caesarean delivery mainly depends on the maternal and/or fetal conditions. A Emergency caesarean delivery has been associated with significantly higher fetal complications than elective caesarean sections. The reason for these complications are many. Beside obstetrical causes, factors like lack of antenatal care, anemia, malnutrition, and illiteracy also play a major role. Early and timely decision for caesarean delivery and proper care in post-operative period decreased the fetal complications.

Keywords: perinatal, outcomes, elective & emergency.

Study Designed: Prospective Comparative Study.

1. INTRODUCTION

Cesarean section is defined as Birth of fetus via laparotomy and then hysterotomy. This definition is not applied in cases of removal of fetus from abdomen in case of uterine rupture or abdominal pregnancy(1).
Maternal morbidity is comparatively more following CS compared to vaginal delivery. Caesarean section is a lifesaving procedure that is commonly practiced in obstetrics. Today it is one of the most commonly performed surgical procedure in obstetrics for maternal and fetal indications.

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Caesarean section is the delivery of a baby, alive or dead, through an abdominal uterine incision after the period of viability." Caesarean section is one of the most commonly performed surgeries in the world. However, increasing rate and number of cesarean deliveries are known to be associated with fetal risks [prematurity, low APGAR (appearance, pulse, grimace, activity, respiration) score, stillbirth and early neonatal death(2) . Caesarean deliveries may be emergency or elective based on their indications. Gestational age at the time of elective caesarean section is a very significant factor in terms of iatrogenic neonatal respiratory distress syndrome(3). Tita et al reported that neonatal morbidity is high in those babies born by elective LSCS done before 39 weeks(4). Emergency LSCS is associated with various risk factors that lead to fetal compromise and adversely affect the perinatal outcome.

Aims and Objectives

To compare fetal morbidity and mortality in emergency ys elective C section.

2. MATERIAL & METHOD

Place of Study: Department of Obstetrics and Gynaecology, Kamla Raja Hospital and J.A. Group of Hospitals, Gwalior (M.P.) for Two Years with Sample Size of 200 cases will be taken.

Pregnant women attending Obstetrics and gynecology department in Kamla Raja Hospital Gwalior, who fulfill the inclusion criteria and exclusion criteria were considered for study. A detailed history was taken which included patient's education occupation, menstrual history, obstetric history, previous obstetric events were asses in detail, past history and surgical history and personal history taken. A thorough general physical and obstetric examination was done. The patients were divided into those undergoing elective caesarean section and those undergoing emergency caesarean section.

Neonatal complications included were need for NICU admission within 3days of birth due to any cause, APGAR score less than 5 at 5min, delayed cry, birth asphyxia, neonatal sepsis, Transient Tachypnea of For neonatal Ischemic Encephalopathy. Newborn, Hypoxic complications follow up done for 7 days.

INCLUSION CRITERIA

1. All the patients admitted in Kamla Raja Hospital in Obstetrics and Gyanecology Department with
2. Singleton pregnancy
3. Term gestation
4. Indication for elective and emergency C section, with or without pregnancy complications.

EXCLUSION CRITERIA

1. Women with multiple pregnancy
2. Women with DM
3. Women with Chronic hypertension
4. Women with APLAS
5. Preterm labour
6. Congenital malformations

Group A-100 cases of emergency C section

Group B - 100 cases of planned /elective C section

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A Cesarean sections are classified on the basis of urgency into 4 categories. Emergency C Section comprise of Categories 1,2 & 3 which has to be performed immediately due to threat to the fetus or the mother.
Elective C section (category 4) is timed to suit the patient and the staff

Indications for Elective C Section:
1. Previous C section
2. Contracted pelvis
3. Mild disproportion associated with elderly primi
4. Preeclampsia
5. IUGR
6. Central placenta previa, etc

Indications for Emergency C Section:
1. Fetal distress
2. Obstructed labour
3. Severe preeclampsia with poor Bishop Score
4. Antepartum hemorrhage
5. Eclampsia, etc

3. RESULTS

Table No. 1: NICU Admission

NICU Admission	Elective N (%)	Emergency N (%)	Total N (%)	P Value
No	94 (63.9%)	53(36.1%)	147(100%)	<0.001
Yes	06(63.9%)	47(88.7%)	53(100%)	
Total	100(50%)	100(50%)	200(100%)	

NICU Admission was needed in 47(88.7%) babies born during emergency LSCS and 6 babies born by elective LSCS. It was statistically significant with p <0.001

Table No. 2: APGAR score less than 5 at 5min

APGAR score less than 5 at 5min	Elective N (%)	Emergency N (%)	Total N (%)	P Value
No	100 (55.6%)	80(44.4%)	180(100%)	<0.001
Yes	00(00%)	20 (100%)	20(100%)	
Total	100(50%)	100(50%)	200(100%)	

APGAR Score of less than 5 at 5 minutes was present in 20 out of 200 babies and all (100%) of these babies were born during emergency LSCS. It was statistically significant with p <0.001

Table No. 3: Delayed Cry

Delayed Cry	Elective N (%)	Emergency N (%)	Total N (%)	P Value
No	100 (55.2%)	81(44.4%)	181(100%)	<0.001
Yes	00(00%)	19 (100%)	19(100%)	
Total	100(50%)	100(50%)	200(100%)	

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Delayed Cry was found in 19 out of 200 babies and all (100%) of these babies were born during emergency LSCS. It was statistically significant with p <0.001

Table No. 4: Birth Asphyxia

Birth Asphyxia	Elective N (%)	Emergency N (%)	Total N (%)	P Value
No	100 (55.2%)	81(44.4%)	181(100%)	<0.001
Yes	00(00%)	19 (100%)	19(100%)	
Total	100(50%)	100(50%)	200(100%)	

Birth Asphyxia was seen 19 out of 200 babies and all (100%) of these babies were born during emergency LSCS. It was statistically significant with p <0.001

Table No. 5: Neonatal Sepsis

Neonatal Sepsis	Elective N (%)	Emergency N (%)	Total N (%)	P Value
No	100 (55.8%)	97(49.2%)	197(100%)	0.246
Yes	00(00%)	03 (100%)	03(100%)	
Total	100(50%)	100(50%)	200(100%)	

Neonatal Sepsis was seen in 3 out of 200 babies and all (100%) of these babies were born during emergency LSCS. It was not statistically significant with p <0.246

Table No. 6: Transient Tachypnea of Newborn

Transient Tachypnea of Newborn	Elective N (%)	Emergency N (%)	Total N (%)	P Value
No	98 (51.3%)	93(48.7%)	191(100%)	0.170
Yes	02(22.2%)	07 (77.8%)	09(100%)	
Total	100(50%)	100(50%)	200(100%)	

Transient Tachypnea of Newborn was seen in 7 babies born during emergency LSCS and 2 babies born during elective LSCS. It was not statistically significant with p <0.170

Table No. 7: Hypoxic Ischemic in Encephalopathy

Hypoxic Ischemic in Encephalopathy	Elective N (%)	Emergency N (%)	Total N (%)	P Value
No	100 (54.3%)	84(45.7%)	184(100%)	<0.001
Yes	00(00%)	16 (100%)	16(100%)	
Total	100(50%)	100(50%)	200(100%)	

Hypoxic-Ischemic Encephalopathy was seen in 16 babies born during emergency LSCS. It was statistically significant with p<0.001.

4. DISCUSSION

The mean age in emergency group was less than in elective group in our study and this difference was statically significant, Regarding booking status in our study, unbooked cases underwent emergency cs more than electives and this finding was statically significant. The study showed that women with no antenatal care were supposed to have more chance of emergency cs. With no proper supervision during pregnancy, women tend to seek advice only

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when complications arise. Hence we may conclude that regular antenatal visit may play a significant role in lowering the emergency cesarean rate.

Caesarean delivery rates increased with advancing maternal age (< 25years-11.6% and ≥40 years - 43.1%). In the present study, the emergency C-section rates (74%) were more common in the age group of 18-24years than the elective C-section (44%) but in the age group of 25-29years the elective C-section rates (36%) were common than the emergency C-section rates (20%). In the age group of 30-34years the elective C-section rates (18%) were common than the emergency C-section rates (4%) but in the age group of 35 and above both elective C-section and emergency C-section rates were same (2%).

Most of the textbooks describe that - Repeat caesarean section was the commonest risk factor for subsequent caesarean section.(13) In the present study, the most common risk factor is previous LSCS. 14(28%) patients had previous LSCS in Elective C-section and 7(14%) patients had previous LSCS in Emergency C-section. The second most common risk factor in Elective C-Section (6%) and Emergency C-Section (4%) was known case of Hypothyroidism. The rate of Elective caesarean section was more compared to Emergency caesarean section in patients with history of previous LSCS.

5. CONCLUSION

The rate of caesarean section is very high in a tertiary care center. The outcome of emergency and elective caesarean delivery mainly depends on the maternal and/or fetal conditions. A Emergency caesarean delivery has been associated with significantly higher fetal complications than elective caesarean sections. The reason for these complications are many. Beside obstetrical causes, factors like lack of antenatal care, anemia, malnutrition, and illiteracy also play a major role. Early and timely decision for caesarean delivery and proper care in post-operative period decreased the fetal complications.

6. REFERENCES

1. Mengesha MB, Adhanu HH, Weldegeorges DA, Assefa NE, Werid WM, Weldemariam MG, Welay FT, Hidru HD, Gebru TT. Maternal and fetal outcomes of cesarean delivery and factors associated with its unfavorable management outcomes; in Ayder Specialized Comprehensive Hospital, Mekelle, Tigray, Ethiopia, 2017. BMC research notes. 2019 Dec;12(1):1-6.
2. Pa, & of (2010) Patal outcome in emergency versus elective cesarean sections of Soul Maternity Hospet Robot Marecen The Pan African medical journal. The African Field Epidemiology Network. Available on https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4907743/ (Accessed: October 20, 2022)
3. Daniel S. et al. (2014) Study of maternal outcome of emergency and elective coesarean section in a semi-rural tertiary hospital, National Journal of Medical Research. Available at: https://www.bibliomed.org/mno=49173 (Accessed: October 20, 2022).
4. Darnel, N. and Dangal, G. (2020) Maternal and fetal outcome in emergency versus elective Journal section, https://www.inhrc.com.np /index.php/inhrc/article/view/2093 (Accessed: October 20, 2022).
5. Diana, V. and Tipandjan, A. (2017) Emergency and elective caesarean sections: Comparison of and Gynecology. Available maternal and fetal outcomes in a suburban tertiary care hospital in Puducherry, International Journal of Reproduction,

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Contraception, Obstetrics https://www.ijrcog.org/index.php/jrcog/article/view/1595 (Accessed: October 20, 2022).

6. Subedi A, Shrestha J, Adhikari KM, Shrestha A, Gurung S. Comparison of Maternal and Perinatal Outcome in Elective and Emergency Cesarean Section in a Tertiary Care Centre. Birat J Heal Sci. 2019;4(1):616–20.
7. Govind KI , TV R. Obstetric Outcome In Elec_ve Vs Emergency Cesarean Sec_on. Paripex Indian Journal of Research. 2018;3:7–8.
8. Burshan M N, Abusnena O, Alhamdi R M, Oommen S, EIHeggiagi MA. Emergency Caesarien Sec_on Among Libyan Women At Khaddar Hospital,Tripoli, Libya. IOSR-JDMS. 2015;14(1):20–2.
9. Ghazi A, Karim F, Hussain AM, Ali T, Jabbar S. Maternal Morbidity In Emergency Versus Elec_ve Caesarean Sec_on At Ter_ary Care Hospital. Journal of Ayub Medical College of Abbotabad. 2012;24(1):10–13.