

Identification of Common Factors Leading to Emergency Cesarean Hysterectomy

Talat Nelofer¹, Isma Rauf¹ and Yasir Arfat²

ABSTRACT

Objective: To determine the common factors leading to emergency cesarean hysterectomy. Emergency cesarean hysterectomy is a serious challenge for a surgeon and for the patient as well. The severity of case demands a skilled and experience surgeon and procedure should be completed swiftly to avoid lethal consequences. It is necessary to predict potential pregnant women who may suffer from the disease as a preemptive measure. This study aims to access major causes which can lead to Emergency cesarean hysterectomy.

Study Design: Descriptive / Cross-sectional study

Place and Duration of Study: This study was conducted at the Department of Obstetrics and Gynecology, Ayub Medical Complex, Abbottabad from March 2011 to March 2012.

Materials and Methods: Total 84 qualified subjects underwent a complete obstetrical clinical workup comprising of history, general physical examination, abdominal and pelvic examination, relevant investigations (laboratory tests). All maternal complications were noted and recorded on pre-designed proforma. The study population included all patients who underwent cesarean delivery after 28 weeks gestations and hysterectomy performed either during cesarean delivery or within 24 hours after cesarean delivery. The age limit of patients was between 15-45 year and any gravidity/ parity. The common factors such as previous cesarean delivery, uterine rupture, undiagnosed placenta previa, uterine atony was taken into consideration.

Results: The frequency of common factors (Previous cesarean delivery, uterine rupture, Undiagnosed placenta previa, uterine atony) was calculated as: previous cesarean delivery 6.0%, uterine ruptured 32.1%, undiagnosed placenta previa 19.0% and uterine atony 46.4%. The age group mainly affected was 26 years to 35 years in all cases and percentage of affected was; previous cesarean history 3.6%, uterine rupture 20.2%, undiagnosed placenta previa 11.9% and uterine atony was 33.3%.

Conclusion: The study concludes that the frequency of leading factors for Emergency cesarean hysterectomy in this setting was uterine atony followed by uterine rupture and most threaten age group was 26 to 35 years.

Key Words: Emergency cesarean hysterectomy; Uterine rupture; Uterine atony

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INTRODUCTION

Obstetrical hysterectomy refers to the surgical removal of the pregnant or recently pregnant uterus. The term includes hysterectomy with the pregnancy in-situ, as well as operations related to the complications of delivery. This life saving obstetric procedure has been in use for more than 100 years. Edward Porro (1876) published the first case report of the procedure¹. Emergency cesarean hysterectomy is associated with significant morbidity and mortality worldwide²⁻³.

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They are seen more often in developing countries due to decreased availability and lack of uptake of antenatal care services especially in the rural areas⁴. This leads to severe consequences. Moreover, increased number of cesarean deliveries worldwide are resulting in higher incidents of morbidities such as uterine rupture, placenta previa, placenta adherens and other complication in subsequent pregnancies^{3,5}. These complications along with cesarean section has posed a risk of postpartum hemorrhage that requires a prompt treatment, blood transfusion and a prolonged hospitalization. Management of postpartum hemorrhage depends various factors, most importantly the cause and severity of the bleeding⁶.

Rupture of the gravid uterus is an obstetric catastrophe, associated with high maternal mortality and morbidity, perinatal mortality, and loss of future fertility as hysterectomy is inevitable in most cases⁷. It is performed within 24 hours after the abdominal delivery⁸. The risk factors associated with emergency cesarean hysterectomy are prior caesarean delivery (76.4%), placenta previa (35.4 %), chorioamnionitis (7.6%) and prior myomectomy (4.2 %). Abnormal placenta adherence is leading indication for emergency

cesarean hysterectomy in 50.7% followed by uterine atony in 34.7 % and uterine rupture in 16.7 % of the cases⁹.

Emergency obstetric hysterectomy is more common in developing countries because of high incidence of improperly supervised deliveries outside the hospitals. The predominant morbidity is post-operative anaemia and wound sepsis which can increase maternal mortality upto 13.3% and perinatal mortality rate at 73.3%¹⁰.

The rationale behind this study is to determine the frequency of various factors leading to emergency cesarean hysterectomy. The results of this study can be used as guideline to make policy recommendations to control the risk factor which can lead to emergency cesarean hysterectomy in our local population.

MATERIALS AND METHODS

This study was conducted in Gynae Obstetrics unit of Ayub Medical Complex, Abbottabad, KP, Pakistan after seeking approval from ethical committee. A descriptive study plan utilized to conduct the study from March 2011 to March 2012. The study was comprised of 84 patients, who underwent emergency cesarean hysterectomy. All these patients went under cesarean section after 28 weeks of gestation and hysterectomy to be performed either during cesarean delivery or within 24 hours after cesarean delivery. The age limit of patients was preferred between 15-45 years. Patient with elective obstetric hysterectomies, placenta previa percreta/accrete diagnosed by ultrasound and chorioamnionitis (pulse >100/min, fever >101°F, uterine tenderness and dirty vaginal discharge) were excluded from the study. All patients were scrutinized for the detection of factors which led to emergency cesarean hysterectomy and included history of previous cesarean delivery, uterine rupture (incomplete or complete) uterine atony and undiagnosed placenta previa.

All the cesarean sections were performed by experienced consultant gynecologist. An exclusion criterion was followed to control confounding variables and bias in the study results. All information including name, age, gravidity and parity was recorded in a pre-designed proforma Data was analyzed by using SPSS version 16.00

RESULTS

Total 84 patients were included in the study sample, having common factors leading to emergency cesarean hysterectomy. Mean age of the patients was 31.71±4.908, ranging from 20 to 42 years. All the patients were handled in emergency and no elective case was handled.

Out of the total, patients presenting with the history of previous cesarean section were 6.0% Fig. 1. Among the positive cases majority of the cases (3.6%) were from

26 to 35 years of age group followed by 15-25 years (2.4%), while there was no case among patients of 36 years above age. Positive cases of uterine rupture were 32.1% Fig. 2. Among the positive cases majority of the cases (20.2%) were from 26 to 35 years of age group followed by 36 years above (9.5%), while only 2.4% were from 15 to 25-year age group.

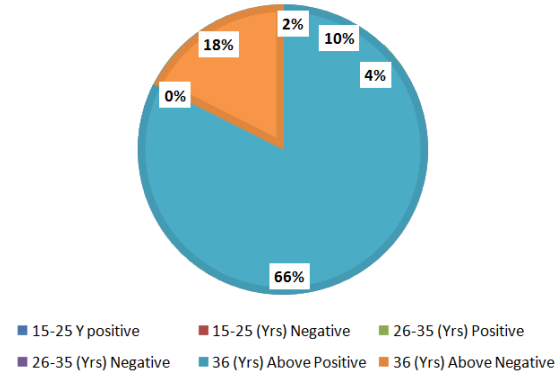


Figure No. 1: A graph showing incidents of emergency cesarean hysterectomy in patients having previous cesarean section surgery and distribution among different age groups.

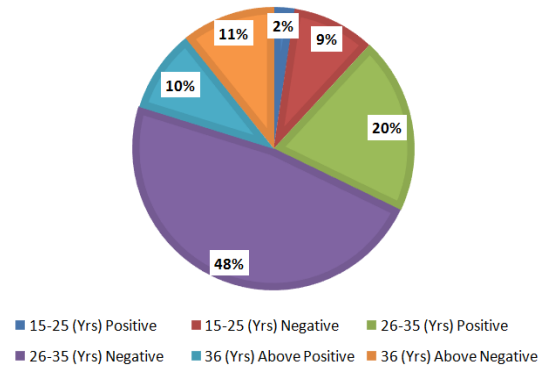


Figure No. 2: A graph showing incidents of emergency cesarean hysterectomy in patients suffering from uterine rupture and distribution among different age groups.

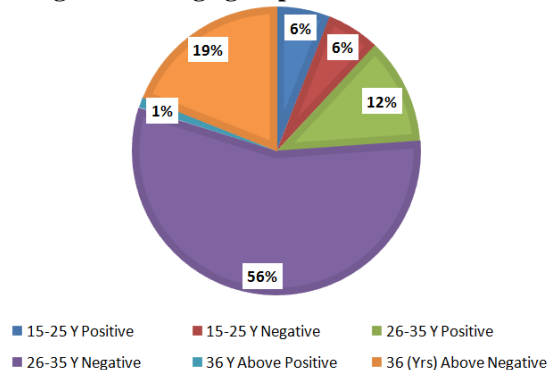


Figure No. 3: A graph showing incidents of emergency cesarean hysterectomy in patients having undiagnosed placenta previa and distribution among different age groups.

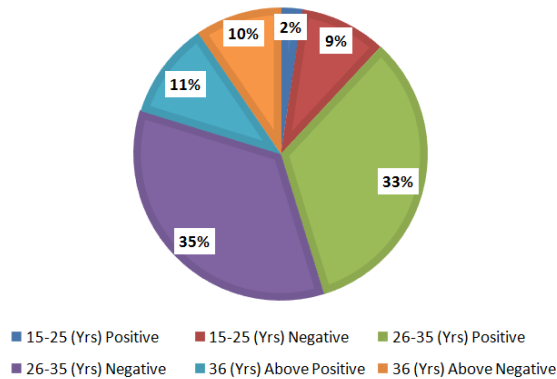


Figure No. 4: A graph showing incidents of emergency cesarean hysterectomy in patients due to uterine atony and distribution among different age groups.

There were 19% positive cases related to undiagnosed placenta previa (Fig. 3). Among these 11.9% were from age group 26 to 35 years followed by 15-25 years age group (6%) and 1.2% in 36 years above age group. Among all, uterine atony reported highest number of cases (42.8%) (Fig. 4). In this like other parameters age group 26 to 35 years were more affected (33.3%), while 36 years above showed 10.7 incidents.

DISCUSSION

There has been a gradual increase in caesarean section rates around the world in the last 25 years, and Pakistan is also experiencing the same. Many researchers are debating for the causes in the increased rate of caesarean sections. Consequently, there are increased morbidities such as uterine rupture, placenta previa, placenta adhesions, for caesarean hysterectomy in many studies. One of the common indications for caesarean section is placenta previa & hemorrhage; this also puts patients at the risk of hemorrhage during & after surgery leading to caesarean hysterectomy. In this study uterine atony was the most common indication (42.8%) The other indication in our study was uterine rupture, uterine atony and placental disorders accounting for 89% of cases. Several studies from different regions of Pakistan have reported different frequencies, indications and maternal outcome associated with emergency caesarean hysterectomy¹¹.

In this study out of the total, patients presenting with the history of previous caesarean section were only 6.0%. This is almost like study conducted by Iqbal Begum¹². However, higher frequencies were noted by Giwa-osagia 26% and Thonet 50%¹³.

In our study out of 84 patients 32.1% had uterine rupture. These results are like study conducted in Turkey in which 30.6% of patients had uterine rupture¹⁴. In our study the complete uterine rupture was found in 22(26.2%) patients from 27 patients of complete and incomplete uterine rupture. The rates of uterine rupture varied from 13 to 32% in different

studies¹⁵⁻¹⁷. Undiagnosed placenta previa was 16 (19.0%) in this study.

Uterine atony, a more common indication in this study was found in 42.8% patients while the remaining 48(57.1%) patients had no uterine atony.

Frequency distribution of age group regarding previous caesarean history was 15-25 years 2(2.4%), 26-35 years 3(3.6%) and 36 years and above was 0(0.0%) from 5(6.0%) of previous caesarean out of 84 patients.

Distribution of age group regarding uterine rupture was 15-25 years 2(2.4%), 26-35 years 17(20.2%) and 36 years and above was 8(9.5%) from 27(32.1%) of uterine rupture and out of 84 patients. This is comparable to study conducted in Abbottabad in which Frequency distribution of age group with regard to incomplete and complete uterine rupture was 15-25 years 0(0%) incomplete uterine rupture, 26-35 years 3(3.6%) and 36 years and above was 2(2.4%) incomplete uterine rupture from the incomplete uterine rupture of 5(6.0%) while 15-25 years 2(2.4%) complete uterine rupture, 26-35 years 14(16.7%) and 36 years and above was 6(7.1%) complete uterine rupture from the complete uterine rupture of 22(26.2%) from the total 27(32.2%) uterine ruptured cases out of 84 patients. Majority of patients who underwent caesarean hysterectomy were in age group 26-40.

Distribution of age group regarding undiagnosed placenta previa was 15-25 years 5(6.0%), 26-35 years 10(11.9%) and 36 years and above was 1(1.2%) from 16(19.9%) of undiagnosed placenta previa out of 84 patients in our study.

Distribution of age group with regard to uterine atony was 15-25 years 2(2.4%), 26-35 years 28(33.3%) and 36 years and above was 6(10.7%) from the uterine atony of 36(42.8%) while the rest 48(57.1%) were no uterine atony out of 84 patients were found in this study.

CONCLUSION

It is concluded from the study that uterine atony is a leading cause to conduct emergency caesarean hysterectomy followed by uterine rupture. Moreover, age group also showed a consistent trend of all parameters studied and it was found that 26 to 35 years age group was the most vulnerable to all ailments studied.

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Author's Contribution:

Concept & Design of Study: Talat Nelofer
 Drafting: Isma Rauf
 Data Analysis: Talat Nelofer, Isma Rauf, Yasir Arfat
 Revisiting Critically: Talat Nelofer, Isma Rauf, Yasir Arfat

Final Approval of version: Talat Nelofer, Isma Rauf, Yasir Arfat

Conflict of Interest: The study has no conflict of interest to declare by any author.

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