ORIGINAL ARTICLE

Elective and Emergency Caesarean Section: Analysis of Maternal Complications at Allama Iqbal Memorial Teaching Hospital Sialkot

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ABSTRACT

Aim: To analyse the maternal morbidity amongst the patients undergoing caesarean sections and to compare it in elective and emergency settings.
Study design: Prospective Study
Place and time of study: Department of Gynaecology and obstetrics, Khawaja Muhammad Safdar Medical College, Sialkot. From May 2017 to June 2019.
Methods: Between May 2019 and June 2019; A total of 16105 patients presented to obstetric department for either elective caesarean section or in labour room and thus landing in caesarean section. These patients were grouped in group 1 and II depending upon their indication of surgery was either elective or emergency. Patients were admitted and their postoperative course in special relation to early complications was monitored. Follow up visits were conducted and proformas were filled for late complications. Following data was recorded: Age, gestational duration, presentation at OPD or emergency, comorbid conditions, Investigations, Blood CE, Hepatitis serology, LFTs.
Results.: Our study include 16105 no of patients who were managed in department of gynae and obs. Out of them 12056 fulfill inclusion criterion .1078 were diabetic ,3745 were hepatitis C +v6, 1598 were hypertensive ,2834 were primigravida and 9222 reported with multiparity. Women with age greater than 35 years have 36.53% of them underwent elective C-section where as 28.76% undergo emergency C section .Patients with history of pervious C section have 75.36% elective operation and in 54.91% emergency section was done. Women with pervious history of D&C 19.79% have elective c section whereas 23.24% women undergo emergency C-section. Patients who presented with malpresentation cephalic 4.01% have elective C section and 9.03% have emergency C section. Patients presented to us with fetal anomaly 9.98% patient undergo elective C-section whereas 38% of them undergo emergency C-section.
Conclusion: Post-operative morbidity is much higher in emergency CS than elective CS. The most important reasons of morbidity are late reporting of the patients to the medical facility, un-booked patients, poor Dai handling, presence of unskillful staff at hospital, presence of any undiagnosed disease like hypertension, diabetes in patients, intraoperative complications like hemorrhage, poor handling, uterocervical lacerations and finally postoperatively PPH is the major risk factor leading to maternal morbidity. Surgical site infection, endometritis, UTI lasting long can ultimately lead to sepsis and bacteremia increasing risk of maternal morbidity.
Keywords: Trimester, abortion, precipitate labour.

INTRODUCTION

Caesarean section is one of the commonest operations performed in the all over the world, and its incidence is increasing. In addition to the increasing rates in developed countries, rates are increasing in some developing countries[2] . The majority of these proceed smoothly and safely; however, caesarean section is a major, open abdominal procedure, often performed in an emergency setting. The major maternal complications associated with C-section are bleeding, surgical site infection, bladder and bowel injury, postoperative ileus, all these complication leads to reopening of the patient. The incidence of re-laparotomy after caesarean section is 0.12–1.04%[3,4] . The most common indications being intra-abdominal bleeding, intra-abdominal abscess or bladder and bowel complications[4] . Major risk factors of emergency C-section include placenta praevia, general anesthesia, obesity, labour dystocia, antepartum/ intrapartum hemorrhage, birth weight of greater than 4kg, oligohydromnios, CPD, multiparity and the presence of uterine fibroid[6]. Hemorrhage at caesarean section occurs for a number of reasons, including uterine atony, tissue trauma , coagulation defects and problems with the placenta. The treatment of hemorrhage at caesarean must be directed at the cause. Uterine atony is treated with uterotonic medications. If these fail, surgical methods such as intrauterine balloon tamponade or B Lynch should be employed. Bleeding from the placental bed, such as with placenta praevia or placenta accreta, can be managed with figure of eight haemostatic sutures or intrauterine balloon tamponade. Intravenous tranexamic acid may be a useful adjunct in all cases of haemorrhage[8]. Ultimately, hysterectomy may be necessary; although when done at caesarean it is associated with high rates of complications, including bladder trauma, ureteric injury and re-laparotomy as discussed by Sackinki et al[9] in their case series. Caesarean section is the most important risk factor for

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postpartum sepsis, which may arise from a number of sources. Wound infection and endometritis are the commonest sites of postoperative infection, although the urinary tract, respiratory tract and nervous system must also be considered. The risk of sepsis is, unsurprisingly, higher for emergency compared with elective caesarean section [10]. Injury to bowel and bladder shows low incidence rate in both emergency as well as in elective C-section[11]. However multiple complications occur in patients who present with multiparity, their uterus were lax and go to uterine atony most of time landing in hysterectomy. Preterm labour , oligohydromnios and CPD are other most important causes of emergency C-section and their incidence rates were increasing in developing countries.

Since no work is done related to the topic in our setup so we collected data of our patients and statistics analyzed using SPSS v 22.

PATIENTS AND METHODS

Between May 2019 and June 2019; A total of 16105 patients presented to obstetric department for either elective caesarean section or in labour room and thus landing in caesarean section. These patients were grouped in group 1 and II depending upon their indication of surgery was either elective or emergency. Patients were admitted and their postoperative course in special relation to early complications was monitored. Follow up visits were conducted and proformas were filled for late complications. Following data was recorded: Age, gestational duration, presentation at OPD or emergency, comorbid conditions, Investigations, Blood CE, Hepatitis serology, LFTs. Complications like wound infection, Investigations like ultrasound abdomen and liver function tests were repeated in follow up visits. Minimum 3 months follow up was mandatory for inclusion in the study. Patients failing to complete folloe up were excluded from the data. Data variables were analysed using SPSS v 22.

RESULTS

General demographic data: Statistical data in general for the two groups is shown in Table I. High spinal anaesthesia , laryngeal spasm, Urinary bladder injury diagnosed peroperative were the complications unrelated to surgery while vesicovaginal and ureterovaginal fistula were the surgery related complications.

Table I: General Data (n=16105)

	Group I	Group II
Patients fulfilling inclusion criteria	12056	n=100
Diabetics	1078	(27.04%)
Hepatitis C positive	3745	(93.95%)
Hypertensive	1598	(40.09%)
Primigravida	2834	(71.09%)
Multiparity	9222	(99.98%)
Total no (n)	3986	8070

Table II: Group wise details

	Group I	Group II
Total no (n)	3986	8070
Age>35years	1455(36.53%)	2321(28.76%)
History of previous LSCS	3004(75.36%)	4432(54.91%)
History of previous D&C	789(19.79%)	1876(23.24%)
Malpresentations (other than cephalic)	160(4.01%)	751(9.30%)
Fetal anomalies	398(9.98%)	3067(38.00%)
Decreased amniotic fluid index	199(4.99%)	1129(13.99%)
Obstructed labour	371(9.30%)	1227(15.20%)
Postmaturity	638(16.00%)	2582(31.99%)
Cord prolapse	159(3.98%)	405(5.01%)
Atepartum haemorrhage	797(19.99%)	3228(40.00%)
PIH	1993(50.00%)	4840(59.97%)
Macrosomia	596(14.95%)	1856(22.99%)
Cephalopelvic dispropotion	398(9.98%)	2018(25.00%)
Fetal distress/ CTG findings	1195(29.97%)	4842(60.00%)
Placenta previa	797(19.99%)	5649(70.00%)
Abruptio placentae	879(22.05%)	3066(37.99%)
Multiple pregnancy	179(4.49%)	743(9.20%)

Table III shows maternal outcome.

	Group I (n=3986)	Group II (n=8070)
Caesarean Hysterectomy	19(0.47%)	39(0.48%)
Postpartum Haemorrhage	33(0.82%)	107(1.32%)
Massive Blood Transfusion	9(0.22%)	16(1.98%)
Surgical site infections	210(5.26%)	534(6.61%)
Anaesthesia related Complications	4(0.10%)	23(0.28%)
Iatrogenic injuries	6(0.15%)	17(0.21%)
Mortality	1(0,02%)	6(0.07%)

DISCUSSION

Maternal outcomes in study by Cruz CZ et al[11], cesarean hysterectomy was 0.32% while in our study 0.47% in elective cases and 0.48% in emergency cases. Incidence of PPH in our study was 0.82% in elective cases and 1.98% in emergency cases however, in study by Denerux-tharaux et al [12], show 2.98% incidence of PPH.

The study by Farchi S et al[13], was show that 2.89% patient were needed massive blood transfusion whereas in our study 0.22% in elective elective cases and 6.61% in emergency cases while study by Moher D et al[14], show 3.99% outcome. iatrogenic complication was more in study by Denerux-tharaux et al [12], while in our study 0.15% in elective and 0.21% in emergency section was reported .in our study complication related to anesthesia was also less 0.10% in elective and 0.28% in emergency section while study by Gibbons L et al[15], show high rates of complications to be 1.02%.

CONCLUSION

Post-operative morbidity is much higher in emergency CS than elective CS. The most important reasons of morbidity are late reporting of the patients to the medical facility, un-booked patients, poor Dai handling, presence of unskillful staff at hospital, presence of any undiagnosed disease like hypertension, diabetes in patients, intraoperative complications like hemorrhage, poor handling, uterocervical lacerations and finally postoperatively PPH is the major risk factor leading to maternal morbidity. Surgical site infection, endometritis, UTI lasting long can ultimately lead to sepsis and bacteremia increasing risk of maternal morbidity.

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