Post Operative Maternal Consequences of Caesarean Section

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Objective: The objective of this study was to analyze Post-operative complication following Caesarean section and to find out the factors which can reduce maternal morbidity associated with Caesarean section. **Study Design:** Descriptive observational study conducted from September 2004 – February 2005. (6 month) in department of Obstetrics & Gynaecology, Lahore General Hospital, Lahore. **Result:** Total number of Births during this period were 2025 total number of Caesarean section were 597 (29.48%) out of which emergency Caesarean section were 518(86.7%) and elective were 79(13.2%). The Post-operative complication rate was (67.7%). The different complications encountered in post-operative period were anemia 58.86%, febrile morbidity 22.2%, endometritis 13.8%, urinary tract infection 10.6%, respiratory tract infection account for 7.4%, paralytic illeus 1.2%, wound infection 7.9%, postpartum haemorrhage (Primary or Secondary) 4.9%, one patient had strong suspicion of pulmonary embolism, sever headache due to postdural puncture was found in 3 patients. Other Anaesthesia complication and bladder injury incidence was about 0.74%. 2 maternal deaths occurred one due to sever postpartum haemorrhage and 2nd due to pulmonary embolism. **Conclusion:** Anemia and infectious morbidity was most common cause of morbidity following Caesarean section: regular antenatal care, good surgical techniques, antibiotic prophylaxis, proper aseptic measures, patient's education and counseling can all work to reduce postoperative complications.

Key words: Caesarean section, maternal

Caesarean section is one of the most common obstetrical operation. Being a major Surgical Operation it is subjected to standard complications of surgery and anesthesia[1]. Caesarean section 4 times as dangerous as normal deliveries[2]. Caesarean section is still associated with increased maternal morbidity and mortality[3]. Today Caesarean section birth is performed in 15-25% of all deliveries in most developed countries, with an associated maternal mortality of less than 1:1000 that is 0.1%[4]. While the complication rate is 15-35% in emergency and 4-10% for elective Caesarean section[5]. The incidence of Caesarean section in tertiary care hospital of Pakistan is about 30-35% because of very high number of unbooked cases land in emergency after having been mismanaged outside[6]. Therefore, the postoperative maternal morbidity and mortality is also high as compared to other developed countries, as most of the patients are unprepared and have undiagnosed medical disorders. Moreover, factors contributing to high rate of postoperative morbidity are; prior internal check ups, Prolonged rupture of membranes, anemia unsuccessful prior effort at vaginal delivery, obstructed labour, haemorrhage, uterine rupture and other obstetrics problems Caesarean section may be done electively, that is performed before the onset of labour or before the appearance of any complication that may constitute an urgent indication or it may be performed in emergency[7].

Maternal and methods:

This prospective observational study was conducted in obstetric and Gynaecology Unit-I, Lahore General Hospital Lahore, from September 2004 – February 2005. All the patient booked, unbooked admitted in unit underwent emergency or elective Lower segment Caesarean section were included in the study. Patient's detailed history was taken all routine and relevant investigation were sent, indications for Caesarean section were noted and any complications arises during postoperative period studied.

Results:

During this 6 month period, total number of births in Obs/Gynae Unit-I were 2025. Total Caesarean section were 597(29.48%), of which emergency Caesarean section were 518(86.7%) and elective Caesarean section were 79(13.2%). Emergency Caesarean section were done mainly for foetal distress, failure to progress, previous 2 or more Caesarean section in Labour, obstructed labour, malpresentation, failed induction, placenta previa, cephalopelvic disproportion etc. While elective Caesarean sections were mainly done for previous 2 more Caesarean section, placenta previa, cephalopelvic disproportion, post date and poor bishop etc.

Most of the patients were unbooked. Only 17% patient had checkup during current pregnancy.Average time duration, for completion of Caesarean section was 60 min. However it very from patient to patient, depending upon condition of patient, complication during operation and surgical skills of operator.

A complication encountered were (405) 67.78%. The most common complications were Anemia and febrile morbidity, other were urinary tract infection, respiratory tract infection, endometritis, paralytic illeus, wound sepsis, postpartum haemorrhage Primary or Secondary. Anesthesia complication, spinal headache, thrombo-embolism and bladder injury. Maternal death was encountered in 2 patients.

Complication rate were higher in emergency Caesarean section than elective Caesarean section.

Table I : Indications for Emergency Caesarean Section

Indications	n=	%age
Fetal distress	168	32.4
Failure to progress	101	19.4
Previous 2 or > in labour	43	8.3
Obstructed labour	34	6.5
Malpresentations & multiple birth	66	12.7
Failed induction	25	4.8
Placenta previa	22	4.2
Eclampsia	16	3
Cephalopelvic disproportion	12	2.3
Others	31	5.9
Indications for Elective Caesarean Section		
Previous 2 or > sections	40	50.6
Placenta previa	9	11.3
CPD	8	10.1
Postdate and poor Bishop	7	8.8
Others	15	18.9

Table II : Percentage distribution of booked & unbooked patient

	n=	%age
Booked patients	102	17
Unbooked patient	495	82.9

Table III : Operative time during Caesarean section

Operative Time	n=	%age
45 min	152	25.4
46-60 min	362	60.6
60-75 min	83	13.9

Average time : 60 min

Table IV: Percentage of post operative complications of Caesarean section

Complications	n=	%age
Total complication	405	67.78
Anemia	206	50.86
UTI	43	10.6
Febrile morbidity	90	22.2
Endometritis	56	13.8
Chest problem	30	7.4
Paralytic illeus	5	1.2
PPH (Pri or sec)	20	4.9
Wound sepsis	32	7.9
Spinal headache	4	0.98
Thromboembolism	3	0.25
Anaesthesia complications	3	0.74
Bladder injury	3	0.74
Maternal mortality	2	0.49

Discussion:

Caesarean section is a common operation with the most significant long term consequences for women of child bearing age [8]. Fetal distress, failure to progress, malpresentation, repeat Caesareans and obstructed labour were the main reason for Caesarean section. These indications are comparable with different survey's done in Pakistan [9]. In our study Anemia was found to be the most important cause of maternal morbidity which is in accordance with study of Patrick [10]. Post operative infectious morbidity was the other most common complication in our study. Which is comparable with other international studies. P duff has reported that the incidence of endometrites is 5-20% where as rate of wound infection is 2-16[11] . Depending upon sociodemographic factors and upon presence of risk factors e.g. ruptured membranes, prolong labour, chorioamnionitis. Repeated vaginal examinations. In our study 22.2% of patient had febrile infectious morbidity. Among these 13.8% were having endomatritis 10.6% having UTI and 7.4% having chest problem, endometritis diagnosed on clinical ground having fever, strong history of dai handling, prolong rupture of membrane and prolong labour. These are the recognized risk factors for endometritis as discussed by Pollock [12]. This arises the need for training of TBA's, appointment of lady doctors in rural areas, health education and counseling of patient's and good surgical techniques. Caesarean deliveries in developing countries carries much greater risk of complications than similar operations performed in Western World. All types of complication were seen in our study. Complications were more common with emergency Caesarean section as compared to elective one. Which is comparable with other studies[1,13,14]. This needs the reduction in Caesarean section rate, each unit should have audit of Caesarean section regarding indications, risk factors, surgical skills, and operation timing. Patient should be encouraged to have regular antenatal checkup and hospital delivery. Provision of effective family planning services, unnecessary induction should be avoided, in order to reduce the number of emergency Caesarean section. Continuous FHR monitoring should be reserved for high risk cases only. Where facilities available foetal distress should be confirmed by fetal scalp pH. Partogram should be maintained. Anemia should be picked up during antenatal period and patient should be encouraged to take haematinics. As anemic patients are more likely to suffer post operative Caesarean section complications and needs for blood transfusion, with all its hazards. U.T.I. another complication encountered in 10.6% of patients. UTI can be avoided by avoiding unnecessary catheterisation, using aseptic measures where catheterization is mandatory, early mobalization of patient and removal of catheter and increase fluid intake. Thromboembolism is a life threatening condition and can be prevented by heparin prophylaxis in high risk patients and only mobilization and elastic stocking in low risk patient. Chest problem can be avoided by steam inhalation and physiotherapy. Wound infection was another important postoperative complication. Several factors which contribute to infection are poor standard of sterilization; use of large gauze, increased duration of surgery and improper haemostasis. Antibiotic prophylaxis play on important role in avoiding postoperative infectious morbidity. In our study, there were 2 maternal deaths, one due to severe PPH due to atony of uterus and second due to thromboembolism. Grand multiparity, prolong trial of

labour, injudicious use of oxytocic drugs, poor state of health all contribute towards postpartum haemorrhage. All these issues needs to be addressed during antenatal period. The proportion of emergency cases with its associated maternal and perinatal morbidity and mortality depends on a number of factor like catchment area of the hospital, type of obstetrical population, ratio between booked and unbooked cases and referral rate of the hospital.

Conclusion

Compared to vaginal delivery, maternal mortality and especially morbidity is increased with caesarean delivery. Most of our patient were multipara and grand multipara belong to poor socioeconomic class, these start pregnancy in anemic state. Furthermore, uncontrolled reproductive pattern, lack of education, ignorance, lack of suitable maternity services, communication, delayed referral, untrained dai's poor transport and poor blood transfusion facilities were the main factors to increase the rate of complication of caesarean section in our setup.

By improving, hospital facilities, patient education, effective family planning services, training of TBA's, early referral, better blood transfusion services and transport facilities. Provision of trained surgeons and anaesthetist round the clock and antibiotic prophylaxis can play an important role in improving the maternal consequences following caesarean section.

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