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Assessment of maternal morbidity in elective and emergency caesarean section in Bihar

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Abstract
Elective caesarean is a term used when the procedure is done at a pre-arranged time during pregnancy to ensure the best quality of obstetrics, anaesthesia, neonatal resuscitation and nursing services. The procedure is termed as emergency caesarean section when it is performed due to unforeseen or acute obstetric emergencies. It is seen that morbidity and mortality are associated more with emergency procedures than with elective procedures. With this background the study was conducted to Study maternal morbidity of elective and emergency caesarean sections.

The study was conducted in SKMCH in Obstetrics and Gynaecology department. The approval of ethical committee had been taken along with the consent from the patients were also taken. Total 50 females having are group of 22-40 year were enrolled in to the study between January 2017 to December 2017.

Maternal morbidity was found to be more in emergency caesarean sections than in elective caesarean sections. Emergency caesarean sections are unavoidable. This study is to highlight the fact that caesarean sections done as an emergency for any indication has its share of problems to the mother and hence caution must be exerted in proper planning of the cases.

Keywords: caesarean section, maternal outcome, elective and emergency caesarean section etc.

Introduction

Caesarean section (CS), also known as C-section or caesarean delivery, is the use of surgery to deliver babies. A caesarean section is often necessary when a vaginal delivery would put the baby or mother at risk. This may include obstructed labour, twin pregnancy, and high blood pressure in the mother, breech birth, or problems with the placenta or umbilical cord. A caesarean delivery may be performed based upon the shape of the mother's pelvis or history of a previous C-section. A trial of vaginal birth after C-section may be possible. The World Health Organization recommends that Caesarean section be performed only when medically necessary. Some C-sections are performed without a medical reason, upon request by someone, usually the mother [1].

A C-section typically takes 45 minutes to an hour. It may be done with a spinal block, where the woman is awake or under general anesthesia. A urinary catheter is used to drain the bladder and the Skin of the abdomen is then cleaned with an antiseptic. An incision of about 15 cm (6 inches) is then typically made through the mother's lower abdomen. The uterus is then opened with a second incision and the baby delivered. The incisions are then stitched closed. A woman can typically begin breastfeeding as soon as she is awake and out of the operating room. Often, several days are required in the hospital to recover sufficiently to return home [1].

C-sections result in a small overall increase in poor outcomes in low-risk pregnancies. They also typically take longer to heal from, about six weeks, than vaginal birth. The increased risks include breathing problems in the baby and amniotic fluid embolism and postpartum bleeding in the mother. Established guidelines recommend that caesarean sections not be used before 39 weeks of pregnancy without a medical reason. The method of delivery does not appear to have an effect on subsequent sexual function [2].

In 2012, about 23 million C-sections were done globally. The international healthcare community has previously considered the rate of 10% and 15% to be ideal for caesarean sections. Some evidence finds a higher rate of 19% may result in better outcomes. More than 45 countries globally have C-section rates less than 7.5%, while more than 50 have rates greater than 27%. Efforts are being made to both improve access to and reduce the use of C-section. In the United States as of 2017, about 32% of deliveries are by C-section. The surgery has been performed at least as far back as 715 BC following the death of the mother with the baby occasionally surviving. Descriptions of mothers surviving date back to the 1500s. With the introduction of antiseptics and anesthetics in the 1800s survival of both the mother and baby became common [3].

Anesthetic issues in pregnant patients

1. Increased risk of aspiration of gastric contents secondary to increased intraabdominal pressure, relaxed LES, and recumbent position. Cuffed ET mandatory if GA performed.
2. Edema of upper airway tissues: especially in preeclamptic/ eclamptic parturients, which may compromise airway and render intubation more difficult.

3. Increased basal metabolic rate and decreased FRC which may lead to rapid desaturation upon the induction of general anesthesia.
4. Supine position the gravid uterus compresses major blood vessels the vena cava and decreases venous return, cardiac output, and blood pressure. Also regional anesthesia performed with cesarean section can exacerbate this effect by promoting pooling of blood. It is important to implement left uterine displacement.

Previous Caesarian remains at the top of the list of indication for both elective & emergency.

Fetal distress is a leading indication among emergency Caesarian section. This in accordance to previous study conducted by Rehana *et al.* where they observed repeat caeasarian section in 22.5% of multigravidae underlying Caesarian section. Sowmya *et al* had established that caesarean delivery is the commonest cause in elective group.

Although usually lifesaving, caesarean delivery increases maternal and newborn risks and this happens more commonly in emergency CS.

Maternal intra-operative and post-operative complications were more common in the emergency cases as compared to elective ones. In study by Rehana *et al* overall intra operative complication were 11.88% which was mainly contributed by the emergency group.

Burrows and associates reported maternal morbidity increased dramatically with Caesarian section compared with vagainal delivery he concluded that the principal sources are puerperal infection, haemorrhage and thromboembolism.

A C-section also increases the risk of complications in future pregnancies. These include

1. Increased risk of placenta previa and accrete: Placenta previa and accreta are significantly more common in pregnancies following one or more cesarean deliveries.
2. Increased risk of uterine rupture: Most uterine ruptures are related to a trial of labor after a previous cesarean delivery (TOLAC). Uterine rupture may require hysterectomy and is associated with an increased risk of fetal and maternal morbidity and mortality.
3. Complications from multiple abdominal surgeries: Adhesions increase the difficulty of future intraabdominal surgical procedures, and may increase the risk of bladder or bowel injury [4].

Elective caesarean is a term used when the procedure is done at a pre-arranged time during pregnancy to ensure the best quality of obstetrics, anaesthesia, neonatal resuscitation and nursing services. The procedure is termed as emergency caesarean section when it is performed due to unforeseen or acute obstetric emergencies [5]. It is seen that morbidity and mortality are associated more with emergency procedures than with elective procedures [6].

With this background the study was conducted to Study maternal morbidity of elective and emergency caesarean sections.

Methodology

The study was conducted in SKMCH in department of Obstetrics and Gynaecology. The approval of ethical committee had been taken along with the consent from the patients were also taken. Total 50 females having age group of 22-40 year were enrolled in to the study between July 2016 to June 2017.

Inclusion Criteria

Females having a pregnancy of at least 26 weeks gestation with a single uncompromised fetus and uncomplicated pregnancy.

Exclusion criteria

Females having foetal distress, toxaemia of pregnancy, CVS/CNS disorders, neuromuscular diseases (e.g. myopathies and neuropathies), hypovolaemia, acid base disturbances and electrolyte imbalance, obese, infection on the back, on anticoagulant therapy and vertebral anomaly.

A thorough and detailed history of present and past medical illness, past history of anaesthetic exposure with concomitant history of drugs taking in pre-operative period was also recorded. Routine investigation including coagulation profile was done. General and systemic examinations of all the patients were done.

The patients were divided into those undergoing elective caesarean section and those undergoing emergency caesarean section. Detailed history and examination was done and the indications for caesarean section, the preoperative findings and complications noted in detail with the help of a proforma. Information regarding post-operative morbidity was also collected.

Results & Discussion

The data from the 50 enrolled patients were collected and presented as below. The data includes the females enduring the elective caesarean section and those undergoing emergency caesarean section.

Table 1: Demographic Data of Enrolled Females

Age in years	No. of Cases
<25 yrs	27
>25yrs	23
Educational status	
Illiterate	2
Primary	5
Secondary	16
Tertiary	27
Socio-economic status	
Upper	2
Middle	13
Lower	35
Type of LSCS	
Elective	20
Emergency	30
Parity	
Primi	22
Multi	28
Booking Status	
Booked	21
Unbooked	29
Total	50

Table 2: Indications for caesarean section.

Indications	No. of Cases	Emergency Cases	Elective Cases
Previous caesarean section	15	5	10
Cephalo pelvic disproportion	13	7	6
Fetal distress	8	8	0
pregnancy induced Hypertension	4	3	1
Failed induction	2	2	0
Ante partum haemorrhage	1	1	0
Obstructed labour	1	1	0
Breech presentation	1	1	0
Multiple gestation	1	0	1
Diabetes mellitus during pregnancy	1	0	1
Chorioamnionitis	0	0	0
Unclear indication	3	2	1
Total	50	30	20

There are 15 cases of previous caesarean section in that 5 cases are referred to emergency and 10 are elective cases. The 13 cases showed the Cephalo pelvic disproportion with 7 patients in emergency an 6 in elective conditions. 8 females showed the fetal distress referring all from emergency condition. There are 4 cases are of pregnancy induced Hypertension from that 3 cases are of Emergency condition and 1 from elective condition. The failed induction was seen in 2 cases. The conditions like Ante partum haemorrhage, Obstructed labour, Breech presentation, Multiple gestation, Diabetes mellitus during pregnancy was seen only in single cases. There was a single cases who had a Diabetes mellitus during pregnancy. There is no indication of Chorioamnionitis. There are also 3 cases with unclear indication.

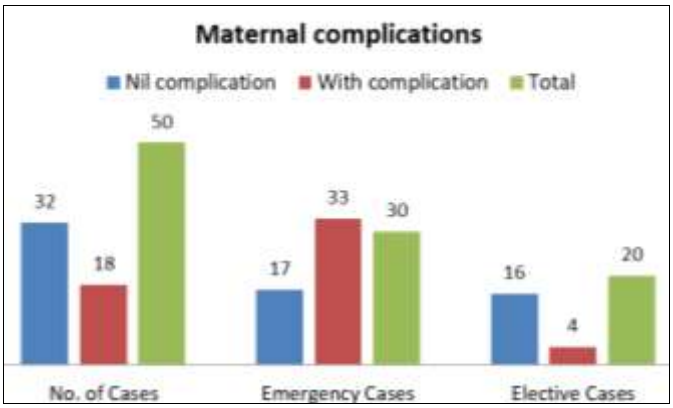

Fig 1: Maternal complications

Caesarean sections have been long practiced as a lifesaving procedure for the mother and fetus. The incidence of caesarean section has risen considerably over the years and is done for even trivial indications. The advances in the field have reduced maternal mortality considerably. But the problem of maternal and fetal morbidity after caesarean section is high. In the index study the rate of caesarean section was 28.7% out of which elective caesarean section was 46.06% and emergency caesarean section was 53.9%.This is comparable to the caesarean section rate in tertiary hospitals in Raipur, India (26.2%) [5].

Caesarean sections have been long practiced as a lifesaving procedure for the mother and fetus. Though it is classified as a major procedure, the incidence of Caesarean section has risen considerably over the years. In June 2010, WHO stated that there is no empirical evidence for the rate it recommends, as it has been a debatable issue. Now the WHO recommends that caesarean section should be done only when it is needed. [7] The situation now is that c/s is adopted for even trivial cases. Though advances in the field have reduced maternal mortality considerably, the problems of maternal and fetal morbidity after c/s still persist. The present study was undertaken to analyze the maternal morbidity associated with c/s with particular emphasis on timing of the procedure.

Conclusion

Maternal morbidity was found to be more in emergency caesarean sections than in elective caesarean sections. Emergency caesarean sections are unavoidable. This study is to highlight the fact that caesarean sections done as an emergency for any indication has its share of problems to the mother and hence caution must be exerted in proper planning of the cases.

References

1. Pregnancy Labor and Birth. Office on Women's Health, U.S. Department of Health and Human Services. Archived from the original on. Retrieved, 2017.
2. Yeniel AO, Petri E. Pregnancy, childbirth, and sexual function: perceptions and facts. International Urogynecology Journal. 2014; 25(1):5-14. doi:10.1007/s00192-013-2118-7. PMID 23812577
3. Moore Michele C, Costa Caroline M. Cesarean Section: Understanding and Celebrating Your Baby's Birth. JHU Press, v, 2. ISBN 9780801881336.
4. Shiliang Liu, Robert Liston M, Joseph KS. *et al*. Study Group of the Canadian Perinatal Surveillance System Maternal mortality and severe morbidity associated with low-risk planned cesarean delivery versus planned vaginal delivery at term. CMAJ. 2007; 176(4):455-60.
5. National Vital Statistics Reports. 2013; 62:1-nvsr62_01.pdf [Internet]. [cited 2013 Dec 19]. Available from: http://www.cdc.gov/nchs/data/nvsr/nvsr62/nvsr62_01.pdf
6. Muhammad Ali, *et al*. Maternal and fetal outcome – comparison between emergency and elective caesarean. The Professional. 2005; 12(1):32-38.
7. Bailey P, Lobis S, Maine D, Fortney J. Monitoring emergency obstetric care: a handbook: World Health Organization, 2009.