



ORIGINAL RESEARCH PAPER

Gynaecology

SURGICAL DIFFICULTIES ENCOUNTERED IN REPEAT CAESAREAN SECTIONS IN A TERTIARY CARE CENTRE

KEY WORDS:

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ABSTRACT	BACKGROUND AND OBJECTIVES: The objective of the study is to observe the intraoperative difficulties encountered during repeat caesarean sections and improve the surgical techquines. Thereby helps to reduce maternal morbidity and improve perinatal outcome.
	METHODS: Here 550 patients have been taken for the study. It is an observational prospective study done over a period of 3 years in patients with repeat caesarean (1,2,3) at Acs Medical College and Hospital Chennai. Inclusion and Exclusion criteria, Study protocol were designed. Various parameters also studied.
	RESULTS: Intraop complications are higher in increasing no of repeat caesarean sections. Rate of complications are higher in emergency caesarean sections.

Introduction

Caesarean section is a surgical intervention which is carried out to ensure safety of mother and child when vaginal delivery is not possible or when the doctors consider that the danger to the mother and baby would be greater with a vaginal delivery.

Caesarean section rates recommended by WHO is 5-15%.

The factors contributing to high caesarean delivery rate in the developed countries include reasons like women are having fewer children, average maternal age is rising, routine use of electronic fetal monitoring, incidence of forceps and vacuum deliveries are reduced, labour induction rates are increased, prevalence of obesity, elective caesarean deliveries for indications like pelvic floor injury, patient request etc., previous caesarean section scar and the fear of litigation.

Multiple caesarean sections showed adverse effects on women health. The adverse effects include adhesions, scar dehiscence, uterine rupture, placenta praevia, placenta accreta, bladder injury and hysterectomy. Multiple caesarean deliveries are associated with more difficult surgeries with increased blood loss.

Aims and objectives:

Aim of the present study is to observe the intraoperative difficulties encountered in repeat caesarean sections.

Definition of Caesarean section:

Caesarean delivery is defined as the birth of a fetus through incisions in the abdominal wall (laparotomy) and uterine wall (hysterotomy). The definition does not include removal of the fetus from the abdominal cavity in case of an abdominal pregnancy or in case of rupture uterus.

Types of Caesarean sections.

(a) Based on Incisions:

Classical caesarean : The upper portion of the uterus is opened by an incision and baby is then extracted. This is not practised anymore due to a higher incidence of complications.

Lower uterine segment transverse: This section is the procedure most commonly used today; it involves a transverse cut just above

the edge of the bladder and results in less blood loss and is easier to repair.

Lower vertical incision : There are indications when the preferred lower segment caesarean section with a transverse incision should be avoided in the interest of the mother and baby.

(b) Based on Timing:

1. A crash/emergency Caesarean section is performed in an obstetric emergency, where complications of pregnancy onset suddenly during the process of labor, and swift action is required to prevent the deaths of mother, children or both.
2. A planned caesarean (or elective / scheduled caesarean), arranged ahead of time , is most commonly arranged for medical reasons and ideally as close to the due date as possible.

(c) Other types:

1. Caesarean hysterectomy consists of Caesarean section followed by the removal of the uterus. This may be done in cases of intractable bleeding or when the placenta cannot be separated from the uterus.
2. Extra peritoneal Caesarean section.
3. A repeat Caesarean section is done when a patient had a previous Caesarean section.

INDICATIONS:

Absolute indications

- Pelvic contraction of moderate to severe degree.
- Fibroid in the lower uterine segment or cervix
- Ovarian cyst incarcerated in the pelvis
- Cancer cervix
- Pelvic bone tumors
- Cervical or vaginal strictures that are indivisible or undilatable

Elective indications:

I. Maternal

- Contracted pelvis
- Pelvic soft tissue tumors
- Soft tissue problems
- Cervical atresia from scarring
- Previous successful repair operation for stress incontinence,

- vesico vaginal fistula and anal incontinence
- Bony deformities affecting the pelvis
- Vertebral column deformities – kyphosis, scoliosis, spondylolisthesis, coccygeal deformity
- Previous traumatic delivery
- Previously infertility
- Maternal request

II. Fetal:

- Malpresentations
- Breech
- Transverse lie
- Unstable lie
- First twin with Malpresentations
- Fetal macrosomia
- Conjoined twins or large sacrococcygeal tumors
- HIV positive mother

Placental

- Major degrees of placenta previa
- Vasa praevia

III Non elective (emergency) indications

- Failure to progress
- Presumed fetal compromise /IUGR/ abnormal CTG
- Failed trial of labour
- Failed induction of labour
- Failed trial of instrumental delivery
- Major degree of placental praevia or in lesser degree, if continuous bleeding occurs
- Abruption placentae
- Fulminating pre-eclampsia or eclampsia with favourable cervix

Maternal Risks

Serious Risks:

- Emergency hysterectomy , seven to eight women in every 1000 (uncommon)
- Need for further surgery at a later date, including curettage, five women in every 1000 (un common)
- Admission to intensive care unit (highly dependent on reason for caesarean section) , nine women in every 1000 (uncommon)
- Thromboembolic disease, 4-16 women in every 10000 (rare)
- Bladder injury, one woman in every 1000 (rare)
- Ureteric injury, three women in every 10000 (rare)
- Death, approximately one woman in every 12000 (very rare)

Frequent risks:

- Persistent wound and abdominal discomfort in the first few months after surgery, nine women in every 100 (common)
- Increased risk of repeat caesarean section when vaginal delivery attempted in subsequent pregnancies, one to four woman in every four.(very common)
- Readmission to hospital, five woman in every 100 (common)
- Hemorrhage, five woman in every 1000 (un common)
- Infection , six women in every 1000 (common)

Fetal risks:

- Safety of the newborns is one of the concerns that have led to an increase in caesarean section rate.
- Though risk of intrapartum asphyxia is less with effective sections, respiratory complications are frequently encountered.
- Risk of fetal lacerations is about 2%
- Iatrogenic prematurity continues to contribute to neonatal morbidity despite availability of ultrasound.
- Risk of respiratory complications, sepsis, NICU admissions, hypoglycaemia, any other adverse outcomes or death are higher when elective section is done at 37 weeks when compared to 38, 39 and 40 weeks all these risks are less if section is done at 40 weeks (Guidelines to prenatal care. 6th edition)

Operative Procedure:

Caesarean delivery requires the same preparative care as for any

major surgery and additional consideration for the status of the fetus. . An indwelling catheter is routinely placed before beginning surgery since the bladder is in the operative field. Informed consent from the patient and her partner includes an explanation of the details of the operation, the risks involved, and the reason it is necessary. Written consent for the procedure, anaesthesia, administration of blood, and possible hysterectomy if necessary is then signed by the patient. With elective primary or repeat caesarean delivery, it is the obligation of the physician to first document evidence of fetal maturity, as outlined in. .

Types of intra-operative complications in repeat caesarean sections:

- Adhesions
- Thinned out lower uterine segment
- Scar dehiscence
- Uterine rupture
- Placental previa
- Placental accreta
- Caesarean hysterectomy

METHODOLOGY

The present study is done from June 2015 to May 2017 (two years). The study was aimed to note the intra operative difficulties in repeat caesarean section during this period, in the department of Obstetrics and Gynaecology, ACS medical college & hospital, Chennai. There were 550 cases of repeat caesarean sections during this study period(both emergency and elective)

INCLUSION CRITERIA : All pregnant women who had previous one or more caesarean section irrespective of age and parity.

EXCLUSION CRITERIA : All women who have undergone other abdominal surgeries.

METHOD OF COLLECTION OF DATA: It is an observational prospective study done over a period of two years in patients with repeat caesarean section.

PROCEDURE OF STUDY:

This is a prospective observational study, carried out for the period of two years in repeat caesarean cases. Patients were selected according to the inclusion criteria. Cases were categorized in to groups

- GROUP-I: Cases with one previous caesarean section
- GROUP-II: Cases with two previous caesarean sections
- GROUP-III: Cases with three previous caesarean sections

The observed intra operative problems were analysed and categorized in relation to number of previous sections and Intraoperative complications encountered in repeat sections. Before posting the patients for repeat caesarean sections either elective or emergency , patient history is taken , clinical examination and few investigations are done.

INVESTIGATIONS:

Haemoglobin percentage, platelet count, blood grouping and typing, screening for HIV, HBsAg, HCV, Bleeding time, clotting time, Renal function tests if needed. Ultrasound examination is done . Pre anaesthetic check up is done for all elective caesarean sections.

RESULTS

The present study was aimed at investigating the intraoperative difficulties in repeat caesarean sections over a period of two years at department of obstetrics and gynaecology , ACS medical college & hospital , Chennai. Total number of deliveries during our study period was 3016. Caesarean section were 1370.

TOTAL CAESAREAN SECTIONS(N=1370)		
TYPE	NO.OF SECTIONS	%
PRIMARY CS	820	59%
REPEAT CS	550	41%

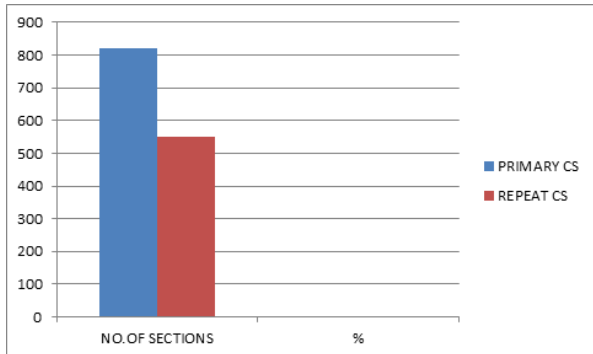


TABLE II
NUMBER OF CASES IN GROUP I, II & III

GROUP	NUMBER	PERCENTAGE
I	510	92.73%
II	39	7.09%
III	1	0.18%

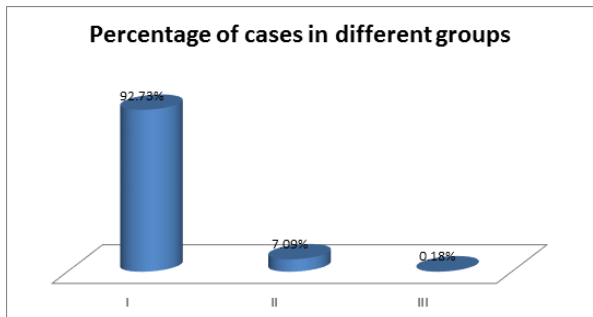


TABLE III
AGEWISE DISTRIBUTION OF CASES

AGE	NUMBER	PERCENTAGE
<20	25	4.63%
21-29	449	83.15%
>=30	66	12.22%

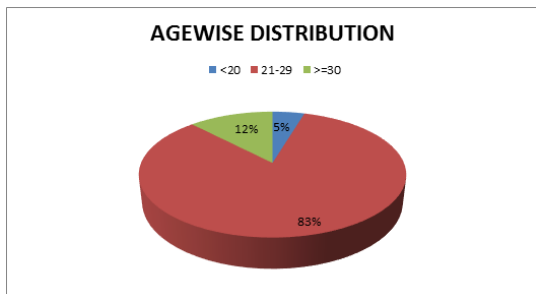


TABLE IV
Number of repeat emergency & elective caesarean in different groups

GROUP	EMERGENCY	ELECTIVE
I	520 (112, 21.54%)	408 (78.46%)
II	29 (7, 24.14%)	22 (75.86%)
III	1 (0, 0.00%)	1 (100.00%)
TOTAL	550 (119, 21.64%)	431 (78.36%)

TABLE V
Number of repeat caesarean section with or without complications in different groups

Group	EMERGENCY CAESAREAN SECTION N = 119		ELECTIVE CAESAREAN SECTION N = 431	
	with complications	without complications	with complications	without complications
I	17 (14.29%)	95 (79.83%)	58 (13.46%)	350 (81.21%)
II	5 (4.20%)	2 (1.68%)	15 (3.48%)	7 (1.62%)
III	0 (0.00%)	0 (0.00%)	1 (0.23%)	0 (0.00%)
Total	22 (18.49%)	97 (81.51%)	74 (17.17%)	357 (82.83%)

- Elective sections were high in our study 78.36% than Emergency sections 21.54%
- Complication rates are higher in emergency caesarean sections in Group – I (14.2%) than in elective sections of group i (13.4%)
- Complications are higher in elective sections of group II (10.09%) than emergency sections of group i (6.9%)
- Over all most of the intra operative complications are noted in emergency caesarean sections than in elective caesarean sections

TABLE VI
COMPLICATION RATES NOTED IN ALL GROUPS

COMPLICATION	PERCENTAGE
Adhesions	42.36%
Thinned out LUS	19.27%
Scar dehiscence	2.00%
Uterine rupture	0.18%
Placenta previa	1.82%
Placenta accreta	0.00%
Bladder injury	0.36%
Caesarean hysterectomy	0.36%

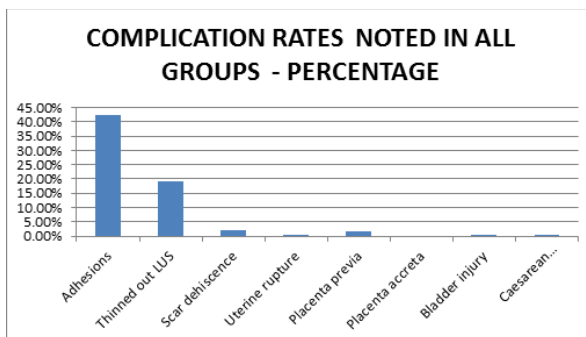
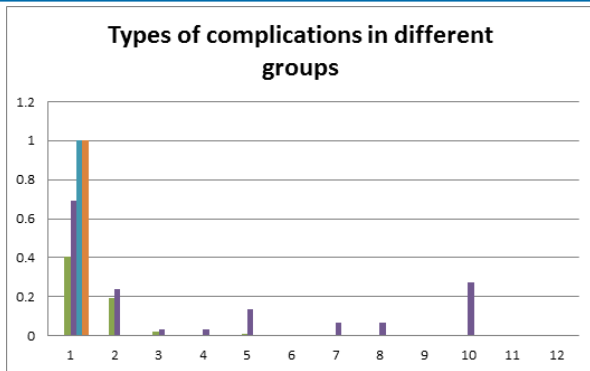


TABLE -VII
TYPES OF COMPLICATION RATES IN GROUP -I, II & III

COMPLICATIONS	GROUP-I		GROUP-II		GROUP-III	
	N=	%	N=	%	N=	%
Adhesions (1)	212	40.77%	20	68.97%	1	100.00%
Thinned out LUS (2)	99	19.04%	7	24.14%	0	0.00%
Scar dehiscence (3)	10	1.92%	1	3.45%	0	0.00%
Uterine rupture (4)	0	0.00%	1	3.45%	0	0.00%
Placenta previa (5)	6	1.15%	4	13.79%	0	0.00%
Placenta accreta (6)	0	0.00%	0	0.00%	0	0.00%
Bladder injury (7)	0	0.00%	2	6.90%	0	0.00%
Hysterectomy (8)	0	0.00%	2	6.90%	0	0.00%
Bowel injury (9)	0	0.00%	0	0.00%	0	0.00%
Blood transfusions (10)	3	0.58%	8	27.59%	0	0.00%



- Adhesions are more common in group III (100%). Rate of adhesions in group II are 68.97% and group I are 40.77%
- Thinned out lower uterine segment is higher in group II (24.14%), in group I 19.04%
- More cases of scar dehiscence (3.45%) are observed in group II, followed by group I(1.92%)
- Placenta previa rates in group II are 13.79%.

DISCUSSION:

Total numbers of deliveries in the present study were 3016. Caesarean sections were 1370. Incidence of primary section was 59% and repeat caesarean section contributed to 41% of total delivery.

Repeat caesarean section – incidence

In our study repeat caesarean section were 41% of total deliveries and 45.42% of all caesarean sections. It is higher than the study by Farkhundah et.al who reported the incidence of 36.5% and 16.5% was the incidence in Hussein et.al study. It may be due to lower rate of primary caesarean section than our study.

Farkhundah et.al	36.5%
Hussein et.al	16.5%
Present study	41%

SUMMARY:

Present study is an observational study done in the department of OBG, ACS medical college & Hospital, Chennai. Total number of deliveries during the study period were 3016, number of caesarean deliveries were 1370 of total deliveries.

Emergency repeat caesarean section in our study were 21.64% and elective repeat sections were 78.36%. Complications were noted in 18.49% of emergency caesarean section and 17.17% of elective caesarean section.

Complication rates are higher in repeat caesarean sections.

CONCLUSION:

Caesarean section is the most significant operative intervention in all obstetrics. Though its development and applications has saved the lives of countless mothers and infants, complications of caesarean sections are also on rise.

Once a woman had a caesarean section, she is " at risk" if repeat caesarean delivery is necessary. Hence primary caesarean section rates have to be reduced whenever possible.

Women with previous caesarean delivery have to be counselled regarding the risk of repeat caesarean delivery well before she plans her next pregnancy. She has to be educated regarding the need of improving her nutrition, usage of contraception to maintain inter delivery interval of at least 24 months and need for regular ante natal checkups when she conceives. Hence as a part of Obstetrician, efforts should be always there to reduce caesarean section rates whenever possible. The caesarean section rates can be reduced if it is accepted by women and society and safely implemented.

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