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# REPEAT CAESAREAN SECTION:*OUR EXPERIENCE AT TERTIARY CARE TEACHING HOSPITAL*

Gynaecology

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## ABSTRACT

**BACKGROUND**: In Present days caesarean section is the commonest obstetric procedure done worldwide. Incidence of caesarean section is increasing giving it a term' repeat caesarean section'. During repeat caesarean section abdominal exploration becomes risky. Scarring and adhesion formation, is known to increase the major complication rate from 4.3% to 12.5% in repeat caesarean section. Maternal and foetal complications in subsequent caesarean section are increasing with the rising rate of primary caesarean section worldwide. The aim of this study is to evaluate indication of repeat caesarean section, intra operative difficulties and fetomaternal outcome in repeat caesarean section.

**OBJECTIVES :** To study prevalence, common indication for repeat caesarean section, intra operative difficulties and fetomaternal outcome in cases of repeat caesarean section.

**STUDY DESIGN:** A randomized retrospective study was conducted in obstetrics and gynaec department at tertiary care teaching hospital. Total 250 cases of repeat caesarean section were included. The case histories, intra operative findings and fetomaternal outcome were recorded and analysed.

**RESULTS:** This study shows that majority of patients were gravida 2(48%) with previous one CS(78%). common indication for repeat caesarean section was foetal distress(24%) followed by cephalo pelvic disproportion(16%).Scar dehiscence were seen in 8% cases while scar rupture had notified in 2 cases. Intra peritoneal adhesions of varied types were seen in majority of cases. Maternal complications like excessive blood loss, fever, wound infections and neonatal complications like prematurity and infections were noted.

**CONCLUSION:** The risk of scar rupture resulting into adverse fetomaternal outcome leads to increase rate of repeat caesarean section. Repeated caesarean section increases the risk of intra operative difficulties like adhesions and blood loss increases with each caesarean section, which leads to increase in morbidity of woman. Thus indication of primary CS should be justified properly and all the antenatal cases with previous CS should be monitored carefully.

## KEYWORDS

Repeat caesarean section, Foetal distress, Intra peritoneal adhesions, Scar dehiscence,Scar rupture.

## INTRODUCTION

Caesarean section is the commonest obstetric procedure worldwide[1-7].Incidence of caesarean section is continuously rising giving it a term 'REPEAT CAESAREAN SECTION'.Global caesarean section rate ranges from 1.7% to 52% with a previous caesarean section being the commonest indication[7].Labour following a previous caesarean section carries risk of scar rupture which is an obstetric emergency that can be catastrophic for mother and foetus leading to increased rate of repeat caesarean section[2].Modern obstetrics practice for medical, social and economic reasons have witnessed an increase in primary caesarean section rates everywhere.The rate of primary caesarean section is increasing now a days for which suggested reasons may be medico legal issues, the increasing use of electronic foetal heart rate monitoring and reduced training in operative vaginal and vaginal breech birth.Previous caesarean section is the most common primary obstetric indication for repeat caesarean section.

## AIMS AND OBJECTIVES

- To know the prevalence of repeat caesarean section.
- To know the indications of repeat caesarean section.
- To know the intra operative difficulties and complication and post operative complication of repeat caesarean section.
- To know the maternal and foetal outcome of repeat caesarean section.

## MATERIAL AND METHOD

An observational retrospective study was conducted in obstetrics and gynaec department at tertiary care teaching hospital.

Total 250 cases with a previous caesarean birth in subsequent pregnancy were selected randomly for this study between June 2016 to May 2017.

## INCLUSION CRITERIA:

- Women having near term pregnancy with one or more prior caesarean section. [regardless of indication for primary caesarean section, no. of caesarean section, type of uterine scar or method of closure of uterine incision.]
- all randomized selected patients with full term pregnancy.

## EXCLUSION CRITERIA:

- Patients with previous caesarean section with pre term pregnancy.

## OBSERVATIONS :

Total numbers of caesarean section from June 2016 to May 2017 are 2057, among them data was analyzed for randomly selected 250 study patients those were comprised of all the pregnant women with history of previous caesarean section availing obstetric and gynaecology facilities at tertiary care teaching hospital.

Different parameters of observations for this study are as below:

**Table 1 : MATERNAL PROFILE**

| BOOKED PATIENTS | EMERGENCY PATIENTS |
|---|---|
| 210 (84%) | 40 (16%) |

| AGE | | PARITY | |
|---|---|---|---|
| YEARS | NO. OF CASES | PARITY | NO.OF CASES |
| 21-25 YRS | 110(44%) | GRAVIDA 2 | 120(48%) |
| 26-30 YRS | 100(40%) | GRAVIDA 3 | 090(36%) |
| 31-35 YRS | 040(16%) | GRAVIDA 4 | 040(16%) |

Table 1 shows maternal profile which includes different maternal parameters like age,parity and types of cases.Among 250 patients 84% were booked patients while 16% were emergency patients. Patients between 20-25 yrs of age group were highest that is 44% and 48% were gravida 2 with previous one CS.

**Table 2: INDICATION OF PRIMARY CAESAREAN SECTION IN REPEAT CAESAREAN SECTION.**

| INDICATION | CASES |
|---|---|
| Cephalo pelvic disproportion | 45(18%) |
| Foetal distress | 55(22%) |
| Oligohydramnios | 25(10%) |
| PIH with foetal distress | 32(12.8%) |
| Mal presentation | 48(19.2%) |
| Ante partum haemorrhage | 10(4%) |
| NPOL | 22(8.8%) |
| PROM | 13(5.2%) |

This table shows indication of primary CS in current pregnancy.

It shows that majority of primary CS had indication of foetal distress 22% followed by Mal presentation 19.2% in primary pregnancy and cephalo pelvic disproportion 18%.

**Table 3: DETAILS OF REPEAT CAESAREAN SECTION**

Number Of previous caesarean section in case of repeat caesarean section

| Number of previous caesarean section | Cases |
|---|---|
| Previous 1 CS | 196 ( 78 %) |
| Previous 2 CS | 038 ( 15%) |
| Previous 3 CS | 016 (7%) |

Majority of patients (78 %) had previous one CS in present series.

Types of repeat caesarean section in case of repeat caesarean section

| Types | Cases |
|---|---|
| Emergency CS | 185(74%) |
| Elective CS | 065(26%) |

Out of total 250 cases of repeat caesarean section 74 % were emergency CS.

**Table 4: INDICATION OF REPEAT CAESAREAN SECTION**

| INDICATION | CASES |
|---|---|
| Previous 2,3 or more CS | 35(14%) |
| Cephalo pelvic disproportion | 40(16%) |
| Foetal distress | 60(24%) |
| Severe PIH with foetal Distress | 38(15.2% |
| Malpresentation (breech,transverse lie) | 20(8%) |
| Ante partum haemorrhage | 12(4.8%) |
| Scar tenderness/diminished scar thickness on USG | 15(6%) |
| Prolonged latent phase(NPOL) | 14(5.6%) |
| PROM | 06(2.4%) |
| Oligohydramnios | 10(4%) |

This table shows indication of repeat caesarean section in current pregnancy.

In present series,the leading cause of repeat caesarean section was foetal distress.Among 250 patients 24% patients had foetal distress while cephalopelvic disproportion, previous more then one CS,hypertensive disorders that is PIH with foetal distress in current pregnancy including eclampsia were other causes of repeat caesarean section. From 15.2% patients with PIH 10 patients had eclampsia.In present study 4.8% patients had antepartum haemorrhage in current pregnancy among them 4 patients had placenta accrete following repeat CS and they ended in obstetric hysterectomy.

**Table 5: INTRAOPERATIVE DIFFICULTIES/ COMPLICATIONS IN REPEAT CS.**

Adhesions:types of adhesions.

| Type of adhesion | cases |
|---|---|
| Parietal peritoneum to anterior surface of uterus | 35(14%) |
| parietal peritoneum to bladder | 19(7.6%) |
| Parietal peritoneum to omentum | 24(9.6%) |
| omentum to uterus | 07(2.8%) |
| Omentum to uterovesical fold | 08(3.2%) |
| Bladder to uterus | 38(15.2%) |
| Bladder to uterus advancement | 32(12.8%) |
| Uterus to small bowel | 02(0.8%) |

In present study,adhesions between parietal peritoneum and anterior surface of uterus were 14% and adhesions between bladder to uterus with considerable advancement were present in 15.2% of cases.

Others:

| TYPE OF COMPLICATION | CASES |
|---|---|
| Scar dehiscence/ Scar rupture | 20(8%) |
| Placenta accrete | 03(1.2%) |
| PPH | 15(6%) |
| Obstetric hysterectomy | 04(1.6%) |
| Surgical intervention[bowel and bladder repair] | 03(1.2%) |
| Excessive bleeding | 30(12%) |

This table shows various difficulties and complications during surgery of repeat Caesarean section.

Common complications were various adhesions, Excessive bleeding and Scar dehiscence in subsequent caesarean section.

Among 250 patients 66% patients had various adhesions as an intra operative difficulties during repeat CS.

8% patients had scar dehiscence/scar rupture in current CS.Among these 20 patients,18 were recorded with scar dehiscence while two had come with rupture of previous caesarean scar in current pregnancy.

1.6% patients with previous caesarean section ended in obstetric hysterectomy.

Accidental bowel and bladder injury was occur in 1.2% patients for which surgical intervention was carried out.

**Table 6: Maternal outcome in repeat caesarean section**

| Various adverse outcome in mother | Cases |
|---|---|
| Excessive blood loss (blood loss>500 ml require blood transfusion) | 45(18%) |
| Fever | 40(16%) |
| Wound infection | 45(18%) |
| UTI and other infection | 35(14%) |
| Bladder and bowel damage | 15(6%) |

This table shows maternal outcome in repeat CS. It shows that majority adverse outcome was excessive bleeding in repeat CS (18%) followed by wound infection (18% ). While fever and other infections were other adverse maternal outcome.

**Table 7: Neonatal outcome in repeat caesarean Section.**

**1. Weight and maturity of neonates born by Repeat caesarean section.**

| Weight(kg) | <2 kg | 2-2.5 kg | 2.6-3 kg | >3 kg |
|---|---|---|---|---|
| Cases | 24(9.6%) | 86(34.4%) | 96(38.4%) | 44(17.6%) |

| Maturity (wks) | Cases |
|---|---|
| <34 wks | 080(32%) |
| 34-37 wks | 110(44%) |
| >37 wks | 060(24%) |

This table shows neonatal outcome in repeat caesarean section including neonatal profile like baby weight and maturity. It shows Majority babies born by repeat caesarean section were 2.5 to 3 kg that is 38.4% and they were Between 34 to 37 wks maturity that is 44%.

**2. Others**

| Other adverse outcome in neonates | Cases |
|---|---|
| APGAR score<7 at 5 mins. | 20(8%) |
| NICU admission | 80(32%) |
| Infection | 60(24%) |
| Mortality | 12(4.8%) |

This table shows various other neonatal adverse outcomes in repeat CS. It shows that 32% babies born by repeat CS got NICU admission and 24% babies got other infections.

## DISCUSSION

Modern obstetrics practice changes in a form of increasing trend of abdominal delivery and for medical, social and economic reason has witnessed an increase in primary caesarean sections rates everywhere[2]. This has created a common term "REPEAT CAESAREAN SECTION" in subsequent pregnancies, giving a high risk pregnancy status to the subsequent pregnancy. This raises the issues of not only deciding the mode of delivery, vaginal birth after caesarean section or elective caesarean section, but also of difficulties in repeat procedure making it a high risk procedure. In developing countries where the antenatal care seeking rate is poor and last moment reporting is very high, makes the management of such cases very difficult and is managed on an emergency basis rather than ideal elective basis[7].

In our study the most common indication for performing repeat caesarean section was foetal distress 24% followed by cephalo pelvic disproportion 16% which was comparable to other study where it is 23% and 6% respectively in P.Sinha et al study[2]. Elective CS is preferred in patients having more then 1 previous CS or 1 classical

scar.16% had more then one CS in present series which is comparable to P.Sinha et al[2](16%).Repeated caesarean birth is related to serious maternal complications when compared to normal birth and first caesarean[2,7].Chances of developing adhesions increase with each caesarean section. Adhesions are the cause of acute morbidity with bleeding and increased surgery duration of chronic morbidity, with chronic pelvic pain and intestinal problems. With increasing number of caesarean section the adhesion rate as well as intensity increases. In addition the adhesions can cause additional increase in morbidity directly or with peripheral organ injury. In our study the most common adhesion was between bladder and uterus that is 15.2% followed by adhesions between parietal peritoneum and anterior surface of uterus that is 14% which is comparable to other study in which most common adhesion was between parietal peritoneum and anterior surface of uterus that is 30%.In our study incidence of scar dehiscence/scar rupture was 8% which is comparable to other study is 5%.Abnormal placenta development following repeated caesarean birth is concurrent with an increased risk of placenta previa and placenta accrete. The risk of placenta previa has been reported to increase by 0.28% to 2% in patients who have undergone at least one caesarean section in a meta analysis, including 36 studies[2,7]. Hysterectomy is another significant morbidity. It is mostly associated with placenta accrete, placenta previa, uterine atony and uterine rupture. Each uterine scar is accompanied with an increasing risk of hysterectomy independent of the presence of placenta previa.

## CONCLUSION

- Previous caesarean section is the most common primary obstetric indication for repeat caesarean section.
- ·labour following a previous caesarean section carries a risk of scar rupture and hypoxic brain injury to foetus, increasing morbidity and mortality in mother and foetus, leading to increase in REPEAT CAESAREAN SECTION.
- Intra operative and post operative complications increase with increase in number of repeat caesarean section respectively.
- Chances of developing adhesions and other intra operative difficulties increase with each caesarean section, further making future obstetrics performances and abdominal exploration risky.
- Morbidity and mortality of mother and foetus increases with increase in numbers of repeat caesarean section.
- Thus we come to a conclusion that cases of previous caesarean section should be educated about the need of routine antenatal care, need of last few visits to a tertiary level centre in order to decide the mode of delivery and to undergo elective or emergency caesarean section in a centre which is both better equipped and manned.

## REFERENCES:

1. William obstetrics; prior caesarean delivery.F.Gary Cunningham:Mc Graw Hill;24th edition
2. Sinha P Gupta U ,Singh J,Srivastava A ,Chauhan S. Per operative findings in repeat cesarean section. Int J Repord Contracept Obstet Gynecol 2016;5:1093-6.
3. Mahale AR ,Ghodke UP,Bhingare PE.Intra operative difficulties in repeat caesarean section- A study of 287 cases. J Obstet Gynecol India .2008;58(6):507-10.
4. Qublan HS,Tahat MY .Multiple caesarean sections,the impact on maternal and foetal outcome. Saudi Med J.2006:210-4.
5. Qublan HS, Alghoweri AS, Abu-khait S, Abu Salem A,Mehej A.Caesarean section rate:the effect of age and parity. J Obstet Gynecol Res. 2002;28:22-5.
6. Gasim T,et al. J Reprod Med.2013 Jul-Aug.Multiple repeat caesarean section:operative difficulties,maternal complications and outcome.
7. Waqarunissa Ahmed,Fkharunissa Waheed, Qamarunissa Muhabat*Raheela Baloch,.Maternal complications in repeated caesarean section.Innovative Journal of Medical and Health Science,[S.I], v.6, n. 2, apr.2016.ISSN-4939.