

## Observational Study

# Intraoperative difficulties and challenges in 261 repeat caesarean section — a rural hospital experience in Pondicherry

Wills G Sheelaa<sup>1</sup>, N Fatima Shanthini<sup>2</sup>

The objective of the study is to analyse intraoperative difficulties encountered and challenges faced in repeat C sections. Retrospective analysis was done on medical records from 2008-2010, on 261 repeat caesarian sections done in SMVMCH, a rural referral hospital. Incidence of primary section in our study is 43.96 % and repeat section 21.85%. Referral 55.6%. Previous one section women were 70%. All had non closure of parietal peritoneum and one layer closure of uterus during previous section. There was difficulty in entering the peritoneal cavity in 136 (52.1%) women due to adhesions in 63, ventrofixation of uterus to abdominal wall 24, and cicaterised RPM scar in 49. Lower segment was inaccessible in 79 (32.6%) due to adherent bladder 37, adherent rectus muscle 6, dense adhesions in 36. Six women needed classical section, bladder injury repair 9, rent repair of dehiscant scar 41 (15.77%). Four had caesarean hysterectomy (1.05%). Relaparotomy was done for intractable intra abdominal bleeding needing uterine artery ligation in 2 post caesarean women and internal iliac artery ligation in one post caesarean hysterectomy vault bleeding. We did not have any mortality.

[J Indian Med Assoc 2018; 116: 21-2 & 26]

**Key words :** Repeat caesarean section adhesion bladderinjury hysterectomy.

Rate of cesarean section has increased due to cesarean delivery on maternal request (CDMR) and newer indications. 68.5% were unbooked, 55.6% were referrals from health centres and 22.3% by practioners. Changing trends in techniques<sup>4,5</sup>, like non closure of parietal peritoneum<sup>4</sup> has threefold increase in the formation of dense adhesions. Scar dehiscence and adherent bladder was more in uterine closure with one layer<sup>5,6</sup>. Difficulty in entering lower segment was due to dense adhesions, adherent bladder and rectus muscle<sup>4,5</sup> over the scar, which increase surgery time and difficulty in delivering the baby<sup>1,6</sup>. Caesarean hysterectomy, uterine artery ligation and internal iliac artery ligation are life saving procedures. Decision to re-open in intractable intra abdominal bleeding following caesarean and preservation of uterus in young women with atonic PPH uterine rupture are dilemmas faced.

**Objective :** To analyse intraoperative difficulties encountered and challenges faced in repeat C sections.

### MATERIAL AND METHODS

The medical records of 261 repeat C sections done in SMVMCH, a teaching hospital and tertiary referral centre were selected for the study. Medical records were analysed retrospectively to find out the difficulties

encountered and challenges faced during repeat sections and management of intraoperative complications.

### OBSERVATION

Total no. of deliveries between 2008-2010 were 1194. Primary cesarean section 525 and repeat caesarean section 261. Incidence of primary sections was 43.96%. Rate of C.sections is increasing due to increased fetal causes and cesarean delivery on maternal request (CDMR). Incidence of repeat section is 21.85%. Women in the age group of 21-25 were 68.2% and 70% were previous one section women. Elective section were 44.4% and emergency 55.6%. Skin incision was RPM in 100 and suprapubic transverse in 161. Uterine incision was low transverse in 255 and upper midline in 6. More than one complication was noted in 102 women and none in 89. All 261 repeat section women had non-closure of parietal and visceral peritoneum, one layer closure of uterus during previous section.

Non-closure of parietal and visceral peritoneum lead to adhesion on anterior abdominal wall, rectus muscle and bladder. There was difficulty in entering peritoneal cavity in 44.5% women, (Table 1) due to adhesions. Single layer closure of uterus of cause dense adhesions, adherent bladder and rectus muscle over the scar, causing difficulty in reaching the lower segment (Table 2). Difficulty in delivering the baby and more bleeding was seen during elective caesarean section due to thick lower segment.

Department of Obstetrics & Gynaecology, Sri Manakula Vinayagar Medical College and Hospital, Puducherry 605107

<sup>1</sup>MBBS, MD (Obstet & Gynae), DGO, Associate Professor and Corresponding author

<sup>2</sup>MBBS, MD (Obstet & Gynae), DGO, Professor

Intraoperative complication is shown in Table 3. Extension of the wound, scar dehiscence and PPH were common complications. In 6 women had to undergo classical section due to unapproachable lower segment. In 9 had bladder injury and repair. Four (1.05%) needed caesarean hysterectomy, 3 were admitted in labour and one was planned repeat caesarean section. Hysterectomy was done for scar dehiscence with broad ligament haematoma, complete rupture uterus, uterine sepsis with DIC and vault bleeding with morbid adherent placenta.

Relaparotomy (Table 4) was done in 3 women for intractable intraabdominal bleeding. In 2 post cesarean women Uterine artery ligation was done. Internal iliac artery ligation was done in 1 post cesarean hysterectomy women.

### RESULTS

Intraoperative Findings n = 261 repeat Cesarean section

- More Than One Complication, n = 102

### DISCUSSION

Incidence of primary caesarean section in our study is 43.96% similar to other authors<sup>1-3,5,8,9</sup>. Rate of caesarean is increasing due to more fetal causes and caesarean delivery on maternal request<sup>1</sup>. Incidence of repeat section in our study is 21.85%, 23.14% in Mahale's<sup>3</sup> and 27.9% in Jitish<sup>5</sup>. In Parveen's<sup>8</sup> study emergency referrals were 60% and ours (55.6%). 70% of our women had one previous caesarean section where as in Praveen's<sup>8</sup> series 57% were previous three caesarean section women. Like Mahale<sup>3</sup> we had 44.4% elective repeat section and 55.6% emergency section. Pratap *et al*<sup>4</sup> has reported noncloure of

Table 1 — Difficulties in Entering peritoneal cavity

Factors	No of cases
Cicatrized puckered RPM scar	49
Ventrifixation of uterus on RPM Scar	24
Adhesions – Flimsy	27
Dense	36

Table 2 — Inaccessible lower segment (n=79)

Factors	No of cases
Dense adhesions	36
Adherent bladder	37
Adherent rectus muscle	6

Table 3 — Intra operative complications

Factors	No. of cases
Scar dehiscence	41
Extension of uterine scar with Broad ligament hematoma	14
Bladder injury	9
Uterine rupture	5
PPH Atonic	79
Traumatic	5
	84

parietal and visceral peritoneum lead to dense adhesions on anterior abdominal wall, rectus muscle and adherent bladder. We had 37 women with adherent bladder and 9 had bladder injuries<sup>4</sup>. Entering the peritoneal cavity was difficult in 136 women due to cicatersation of RPM scar in 49,<sup>1,3</sup> and ventrofixation of anterior abdominal wall in 24,<sup>2,3</sup>. Dense adhesions in 36,<sup>1,3</sup> and adherent rectus muscle in 6,<sup>4</sup>.

Single layer closure of uterus caused dense adhesion<sup>4,5</sup> adherent bladder<sup>4,6</sup> bladder injury<sup>1,4,6</sup> and adherent rectus muscle over the scar<sup>4,6</sup> causing difficulty to approach the lower segment. In our study, we had difficulty in 32.6% (79) women to reach lower segment increasing surgery time. Difficulty in delivering the baby and more bleeding was encountered in 19 women due to thick lower segment in elective caesarean section<sup>1-3,6</sup>. Extension of the uterine scar with broad ligament haematoma was seen in 14 women while delivering the baby<sup>3,10</sup>. Scar dehiscence was seen in 41 women (15.77%) needing rent closure<sup>10</sup>. Five women had rupture uterus<sup>10</sup> (1.05%) PPH was seen in 84 women in our study (32.1%) in Parveen<sup>8</sup> study, 10% and Archana<sup>10</sup> 8%. Caesarean hysterectomy was done in 4 women in our series. Which is comparable with authors<sup>8-10</sup>. Relaparotomy for intra abdominal bleeding was reported by authors<sup>1,8,10</sup>. We had three relaparotomies. In 2 post cesarean women had uterine artery ligation and one post hysterectomy women had internal iliac artery ligation for vault bleeding. Archana<sup>10</sup> has reported one relaparotomy and uterine artery ligation and Praveen<sup>8</sup> one internal iliac artery ligation. Arachana *et al*<sup>10</sup> has reported 6 maternal deaths and VVF in their series. We did not have any mortality or VVF in our series. Average hospital stay was 10 days.

### CONCLUSION

Rate of caesarean repeat section is increasing due to more fetal causes<sup>1,2</sup> and caesarean delivery on maternal demand<sup>1</sup> (CDMD). Non closure of visceral and parietal peritoneum<sup>4</sup> and one layer closure of uterus<sup>3,4</sup> cause difficulty in entering peritoneal cavity reaching the lower segment and difficulty in delivering the baby due to formation of adhesions. Repair of bladder, bowel, uterine injury, life saving procedures like internal iliac artery and uterine artery ligation, caesarean hysterectomy are challenges faced when blood and trained personals are not available. Decision to reopen for intractable intra abdominal bleeding following caesarean section, decision to preserve uterus in atonic PPH and uterine rupture in young women are dilemmas faced. High caesarean rate, high morbidity and risk of mortality<sup>1</sup> as often patients report in last moment with labour pain<sup>10</sup>.

### REFERENCES

- 1 Seth Shirish. Kurush P — History of Cesarean Section. *J Obstetric Gynecol India* 2009; **59**: 413-23.

(Continued on page 26)

Table 4 — Relaparotomy in intrabdominal bleeding (n=3)

Procedure	Indication	No. of cases
Uterine artery ligation	Post caesarean	2
Internal iliac artery ligation	Broad ligament hematoma	
	Post caesarian Hysterectomy	
	Vault bleeding	1

- 2 Doshi Haresh, Tripathi Jagruti — Cesarean Section – Changing trends – A National Study. *J Obstetric Gynecol India* 2009; **59**: 140-4.
- 3 Mahale Arun, Ujwala Popaj — Intra operative difficulties in Repeat Cesarean Sections – A study of 287 cases. *J Obstetric Gynecol India* 2008; **58**: 507-10.
- 4 Bhat Parvati V, Kumar Pratap, Moyya Shrimathi — Should parietal peritoneum be closed at primary Cesarean Section? *J Obstetric Gynecol India* 2009; **59**: 220-3.
- 5 Shah Jitesh, Mehta Meghana — Analysis of mode of delivery in women with previous one cesarean section. *J Obstetric Gynecol India* 2009 59: 136-9.
- 6 Blumenfeld YJ, Daniels K — Single versions double layer hysterectomy closure at primary cesarean delivery and bladder adhesions : *BJOG – International Journal of Obstetrics and Gynaecology* 2010; **117**: 690-3.
- 7 Z shi L Ma Y Yang, H Wang — Adhesion formation after previous cesarean section – meta analysis and systemic review *BJOG – International Journal of Obstetrics and Gynaecology* 2011; **118**: No 4.
- 8 Marwaha P, Kaur M, Gupta A — Peripartum hysterctomy – A five year study. *J Obstetric Gynecol India* 2008; **6**: 504-6.
- 9 S Minalini, Jindal M, Kamat A — Obstetric hysterectomy – A life saving emergency. *J Obstetric Gynecol India* 2008; **58**: 138-41.
- 10 Kumari A, Sahay PB — A clinical review of emergency obstetric hysterectomy. *J Obstetric Gynecol India* 2009; **59**: 424-31.