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Study of Intraoperative Difficulties in Repeat Caesarean Sections

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ABSTRACT

From the recent past, repeated casarean section rates have been dramatically increased along with their complications. Multiple cesarean sections showed adverse effects on women health. The adverse effects include adhesions, scar dehiscence, uterine rupture, placenta previa, placenta accreta, bladder injury and hysterectomy. Multiple cesarean deliveries are associated with more difficult surgeries with increased blood loss.

AIM OF THE STUDY: The aim of the present study is to note the intraoperative difficulties encountered in repeat C-section and their management.

The present study is hospital based study during the period of April 2014 to March 2015 (one year) in the department of Obstetrics and Gynaecology, Government General Hospital, Kurnool.

KEYWORDS | Repeat caesarean section, intra peritoneal adhesions, scar dehiscence, uterine rupture.

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. Proportion of caesarean sections to the total births is considered as one of the important indicators of emergency obstetric care (World Health Organization, 2009). Caesarean section rates recommended by WHO is 5-15%. A rate higher than 15per cent indicates over utilization of the procedure for other than life saving reasons (WHO, 1985; WHO, 1993). Over the last 20 years, there has been rapid increase in the caesarean section rate all over the world and has become a serious public health issue. The factors contributing to high cesarean delivery rate in the developed countries include reasons like small family norms, elderly primi rates, routine use of electronic fetal monitoring, reduced incidence of forceps and vacuum deliveries, increase in induction rates, patient request, previous cesarean section scar and the fear of litigation. Overall, previous cesarean delivery is the leading obstetrics indication for cesarean delivery (39%) in many obstetric units followed by dystocia (28%), fetal distress (14%), breech presentation (9%) and others (10%) (Porreco and Thorp, 1996).

The rate of cesarean deliveries substantially increased worldwide, including India. In a study done by ICMR, on rates of caesarean sections in teaching hospital in India, rate was increased from 21.8% in 1993-94 to 25.4% in 1998-99.

The risk of major complications increase with the cesarean delivery rates. Especially scarring and adhesion formation is known to cause increase in the major complication rates from 4.3 to 12.5% depending upon the number of previous cesarean section (Nisebblat et al., 2006). Intra peritoneal adhesions have an incidence varying from 5.5 to 42.5% (Myers & Bennet, 2005).

AIMS AND OBJECTIVES OF THE STUDY: Aim of our study is to observe the intra operative difficulties encountered in repeat caesarean sections.

MATERIALS AND METHODS: The present study is hospital based study during the period of April 2014 to March 2015(One year). This study was aimed to investigate the intra operative difficulties in repeat cesarean section during one year period, in the Department of Obstetrics and Gynaecology, Government General Hospital, Kurnool. 1281 cases were undertaken in order to investigate the intra operative difficulties of repeat C-section and on table management of complications.

INCLUSION CRITERIA: All women who have undergone one or more C-section irrespective of age and parity.

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

PROCEDURE OF STUDY: This is a prospective observational study, carried out for the period of one year in repeat cesarean cases. Cases were categorized into 3 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 analyzed and categorized in relation to number of previous caesarean sections and intra operative complications encountered in repeat sections. Before posting the patients for repeat caesarean sections either elective or emergency, patient history is taken, clinical examination, ultrasound examination and laboratory investigations were done. In clinical examination, type of scar over the abdomen noted and uterine scar tenderness is checked. All the intra operative details were noted and complications were managed promptly. Postoperative period was monitored and patients with uneventful post operative period were discharged after 7th post operative day.

RESULTS: Total number of deliveries during our study period were 13,267. Caesarean sections were 2953 (22.2%). Number of primary caesarean sections were 1672(12.5%). Repeat caesarean sections were 1281 (9.6%). Compications rates are higher in emergency caesarean sections in group-I (45.5%) than in elective sections of group-I (22.2%). Complications are higher in elective sections of group-II (10.09%) than emergency sections of group-II (6.9%). Complications are higher among elective sections of group-III (18.6%) than in emergency sections of group-III (0.2%). Overall most of the intra operative complications are noted in emergency caesarean sections (52.8%) than in elective caesarean sections (32.5%). The re-

sults were tabulated in the following tables.

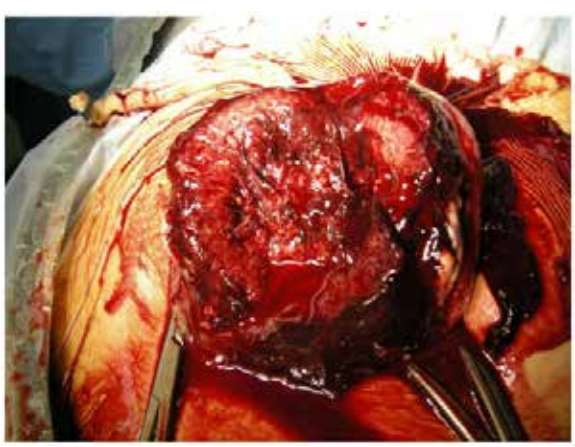
Table No-1: Types of caesarean section based on urgency with regard to with and/or without complications.

Group	Emergency caesarean Sections (n=746)				Elective Caesarean Sections (n=535)			
	With complications		Without Complications		With complications		Without Complications	
I	340	45.5%	324	48.8%	119	22.2%	307	57.3%
II	52	6.9%	28	35%	54	10.09%	54	10.09%
III	2	0.2%	-	-	1	18.6%	-	-
Total	394	52.8%	352	47.1%	174	32.5%	361	67.4%

Table No-2: Types of complication rates in group I. II and III

Complications	Group-I (n=1090)		Group-II (n=188)		Group-III (n=3)	
	No.	%	No.	%	No.	%
ADHESIONS	241	22.1%	68	36.1%	2	66.6%
THINNED OUT LUS	213	19.5%	37	19.6%	1	33%
SCAR DEHISCENCE	24	2.2%	7	3.7%	1	33%
RUPTURE UTERUS	12	1.1%	3	1.5%	-	-
PLACENTA PREVIA	6	0.5%	1	0.5%	-	-
PLACENTA ACCRETA	-	-	1	0.5%	-	-
BLADDER INJURY	-	-	1	0.5%	-	-
HYSTERCETOMY	1	0.09%	1	0.5%	-	-
BOWEL INJURY	-	-	-	-	-	-
BLOOD TRANSFUSIONS	106	9.7%	80	42.5%	2	66.7%

Fig.No.1 Uterine Rupture



DISCUSSION: Our study is compared with 3 other similar studies.

Study-I: Multiple caesarean sections, the impact and outcome, Hussein.S.Qublan, Yousuf Tahat, Prince Rasheed Hospital, Irbid, Jorban.

Study-II: Higher order multiple repeat caesarean sections: maternal and fetal outcome, Tariq Y.Khashoggi, King Khalid University Hospital, Riyadh, Saudi Arabia.

Study-III: Risks of caesarean delivery to mother and baby, CIMS fact sheet.

In our study repeat caesarean sections contributed to 9.6% of total deliveries and 4.3% of all caesarean sections. It was found much lower than other studies that were compared. Maternal risk was higher in caesarean sections than in vaginal births and the risk increased with the number of caesarean sections. The risk was much higher with emergency caesarean sections than in elective group. The rate of complications in emergency caesarean sections was 52.8% compared to 40.6% in elective group. Adhesions were higher in G-III and it was similar to studies done in Jordan and Riyadh. Scar dehiscence was higher in G-III compared to other groups. It was similar to other studies.

Uterine rupture is higher in G-II in our study. In other studies done in Riyadh and Jordan it was higher in G-III. Placenta previa incidence was similar in G-I and G-II in our study. It was higher in G-III in studies in Jordan and Riyadh. In support with this a study of Herkowitz et al suggested that single caesarean section is enough to interfere with the normal physiological stretching of LUS in subsequent pregnancies, thus preventing normal migration of the placenta away to the upper uterine segment which results in increased incidence of placenta previa with scarred uterus. Placenta accreta was noted in one case of G-II in our study for which caesarean hysterectomy was done. Bladder injuries were higher in G-II in our study and it was higher in G-III in other studies. Need for blood transfusions were higher in G-III, similar to other studies. With increase in repeat sections intraoperative complications occur at a higher rate, it takes more operating time and post operative complications like urinary tract infections, respiratory complications, endometritis, wound infections, wound dehiscence, hematoma and thromboembolism. Hence with increase in the number of repeat caesarean sections intra operative complications were higher and maternal morbidity and mortality were increased significantly.

SUMMARY: Caesarean section rates all over the world are at a rising trend. In India Kerala has the highest rate of caesarean section deliveries. There is a need to reduce the caesarean delivery rates as there is increase in the maternal morbidity. Number of caesarean sections in our institute during our study period were 2953(22.2%) of total deliveries, which was much higher than the WHO range for caesarean sections (5-15%). Primary sections constituted 12.6% and repeat caesarean sections constituted 9.6% of total deliveries. Hence there is need to reduce the primary caesarean deliveries to reduce the maternal and fetal morbidity.

In our study adhesions were common followed by thinned out LUS, scar dehiscence, uterine rupture, placenta previa, placenta accreta, bladder injury, caesarean hysterectomy. With increase in the number of previous caesarean sections complication rates were also increased.

CONCLUSION: Caesarean section is the most significant operative intervention in obstetrics. Though its development and application has saved the lives of countless mothers and infants, complications with caesarean section are also increasing. Caesarean section rates are increasing all over the world during the past few decades. In India it was 2.9% in 2005-2006, which has increased to 9.8% in 2005-2006, and stabilized to 9.2% in 2007-2008. It indicates we are in the range of caesarean section rates proposed by WHO (5-15%). Caesarean section has more adverse effects on the mother if it is a primary or a repeat section. As in our study of intra operative difficulties in repeat caesarean sections, adhesions, scar dehiscence, uterine rupture, placenta accreta are increasing with the increase in the number of previous sections. Placenta previa incidence is almost similar in group-I and II. As the caesarean delivery rates are increasing, efforts are in progress to reduce the incidence of adhesions in repeat caesarean deliveries. Peritoneal closure (Lyell et al), pfannensteil incision when ever possible (Brill et al), usage of FDA approved absorbable barrier like ORC(Interceed), SHCC(Seprafilm) are some of the measures that can reduce adhesion formation. If once a woman had caesarean section, she is at risk of repeat caesarean section. Hence primary caesarean section rates has to be reduced whenever possible.



Fig.No.2 Interceed

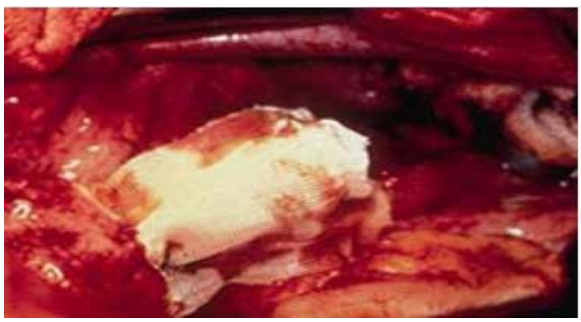


Fig.No.3 Placing Interceed after uterine closure to prevent adhesions

Women with previous caesarean delivery has to be counseled 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 an inter delivery interval of at least 24 months. Hence as a part of obstetricians, effort should be always there to reduce caesarean section rates whenever possible. The caesarean section rates can be reduced, but only if it can be medially justified, accepted by women and society and safely implemented.

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