ORIGINAL ARTICLE

Different Techniques for Uterine Repair During C-Section: Randomized Controlled Trial

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ABSTRACT

Background: In the field of obstetrics and gynecology, Caesarean section is the most commonly performed surgical procedures globally.
Aim: To compare intra-operative complications (nausea and vomiting) and postoperative complication (pain) of exteriorized and in situ uterine repair during caesarean section**.**
Methodology: In present randomized controlled trial, all patients (200) underwent elective c-section were assembled into two groups. In Group-A, uterus was repaired in situ. In Group-B, exteriorization of uterus was done. The two groups were compared for intra-operative as well as post-operative complications of above mentioned surgical procedure. All female patients were primary-gravid having term pregnancy (37-40) weeks.
Results: In group-A mean age was 25.37±2.87 years and in group-B was 25.05±2.78 years. In group B patients developed more nausea and vomiting as well as post-operative pain with significant P-value ≤ 0.05. **Conclusion**: Thus concluded that in situ uterine repair is relatively safe with less intra as well as post-operative complications when compared to exteriorization repair during caesarean delivery.
Keywords: Uterine repair, Cesarean section and Complications.

INTRODUCTION

In the field of obstetrics and gynecology, Caesarean section is the most commonly performed surgical procedures globally. Closure of the uterine incision is a key step in cesarean section. It accounts for 50- 70% of deliveries depending on the facilities available globally[1].

Many surgical techniques for C-section deliveries have been proposed previously with many aims like reduction in surgical time, easy approach, economical and efficacious, decreasing complications intra as well as post-operatively including duration of hospital stay and morbidity[2-4].

Literature review revealed that two well established techniques like repair of uterus in situ within the peritoneal cavity or temporarily exteriorized uterus onto the mother's abdomen to allow uterine repair can be employed during C-section.[5] Although, there is variable consensus among the health care workers in the techniques of C-section globally. Literature review showed that in opinion of some health workers exteriorization of uterus offers better exposure of the angles and result in an easier and fast repair. Elevated uterus promotes venous drainage and reduces vascular congestion.[6] Opponents of exteriorization claim that in extra abdominal repair there are concerns about nausea and vomiting due to uterine traction and exteriorization increases post operative pain[7].

In the light of increasing burden of mortality rate and commonly used C-section technique nowadays in our society, the current project was planned to compare intra-operative complications (nausea and vomiting), and postoperative complication (pain) during caesarean section**.**

METHODOLOGY

In present randomized controlled trial, all patients (200) underwent elective c-section by keeping 95% confidence level and 80% power of test. All were assembled into two groups. They were enrolled from January-July 2017 in the Department of Obstetrics and Gynaecology, Shalimar Teaching Hospital, Lahore, Pakistan. Method adopted in current study was similar to one previous study but with some modifications[8]. After ethical approval from hospital's committee written informed consent was taken. In present randomized controlled trial, all patients (200) underwent elective c-section were assembled into two groups. In Group-A, uterus was repaired in situ. In Group-B, exteriorization of uterus was done. The two groups were compared for intra-operative as well as post-operative complications. All enrolled female patients were primary gravid having term pregnancy (37-40) weeks. Those who failed to fulfill inclusion criteria were ruled out from present study. Data was analyzed by SPSS v20.0. The age and gestational age were measured by mean and standard deviation. Variables like pain, nausea and vomiting was measured by frequency and percentage. Chi-square test applied to determine the significant difference of vomiting and nausea and pain in both groups with P-value ≤ 0.05 as significant.

RESULTS

Subjects (n=200) were divided in two equal groups i.e. Group-A (uterus repair in situ) and Group-B (exteriorization of uterus). Variables like age and gestational age presented as mean**±** SD (Table-1).

Table-1: Baseline characteristics between groups

Age (years)	Group-A(n=100)	Group-B (n=100)
20-25	47 (47%)	51 (51%)
26-30	53 (53%)	49 (49%)
Mean±SD	25.37±2.87	25.05±2.78
Gestational Age (weeks)		
37-38	62 (62%)	57 (57%)
38-40	38 (38%)	43 (43%)
Mean±SD	38.12±0.98	38.17±0.92

Table-2: Comparison of complications between both groups

Nausea & vomiting	Group-A(n=100)	Group-B (n=100)	P-value
Yes	23 (23%)	44 (44%)	0.001*
No	77 (77%)	56 (56%)	
Total	100	100	
Pain			
Yes	30 (30%)	62 (62%)	0.000*
No	70 (70%)	38 (38%)	
Total	100	100	

*significant P-value

Comparison between two groups showed that complications developed more in group-B both intra as well as post-operatively in current project as shown by table-2.

DISCUSSION

The surgical procedure adopted should withstand the stress of delivery and pain of giving birth. The current study was planned to compare both procedures i.e. exteriorization and in situ repair of uterus while performing caesarean delivery so that it enables obstetricians to choose the best procedure in which there is decrease intra-operative post delivery nausea, vomiting and less postoperative pain thus practicing a procedure which is most effective in reducing morbidity of patients and improving their condition.

The findings of the present study are in line with one previous study who preferred in situ repair by determining that extra abdominal repair develops nausea and vomiting due to uterine traction (post delivery nausea or vomiting 18% in insitu group compared with 38% in group in which exteriorization of uterus done (P<0.04) and exteriorization increases post operative pain[7,9].

Findings of present study were in contrast with other studies carried by Walsh CA that showed intra operative nausea and vomiting accounted 27% for exteriorized group whereas 28.7% resulted for in-situ group (P 0.11) and according to study done by Coutinho CI that in exteriorized group VAS at 24 hours is 19.1% and in in-situ group 23.1% (P 0.22)[6,10].

A local study by Nasir H and colleagues showed that uterine exteriorization was a valuable technique in uterine repair during cesarean section in terms of better visualization of scar and there was no significant difference in blood loss and number of sutures. Length of procedure was shorter in uterine exteriorization group as compared to in-situ repair group[11].

Limitations: Potential variable outcomes like loss of blood and operative time were not studied in this present study.
Strengths: In further trials these potential variables should also be included in the research to further authenticate the results of present study.

CONCLUSION

Thus concluded that in situ uterine repair is relatively safe with less intra as well as post-operative complications when compared to exteriorization repair during caesarean delivery.

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