

# Impact of Inverted Interrupted Skin Suturing Versus Continuous Suturing in Episiotomy on Postpartum Pain in Primigravida

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## Abstract

**Introduction:** Episiotomy is an incision that is made in perineum at the end of part of second stage of delivery.

**Aim of the work:** To detect the effect of continuous against interrupted technique of episiotomy closure on post-delivery pain.

**Conclusion:** The interrupted way of closing episiotomy shows less postoperative pain.

**Keywords:** Delivery; Postpartum; Pain

## Introduction

Episiotomy is an incision that is made in perineum at the end of part of second stage of delivery. There are Long term sequels of episiotomy repair. A considerable number of ladies complains from perineal pain and up to twenty percent have long term complications e.g., dyspareunia [1]. The best method for repairing episiotomy is the method that is not time consuming and lesser materials and causes lesser pain in the immediate and long term periods.

And so helps to start sexual relation early with a lesser pain and has a lower chance for resuturing [2]. The usual method that was applied for closing episiotomy was using three layer closure method [3]. Although there are various techniques to suture episiotomy, Now 2 well known methods of repair are used subcutaneous continuous and interrupted methods [4]. Most researchers believe that using continuous sutures to repair vagina and perineum has lesser pain than the way of closing it by interrupted sutures [5]. Vicryl Rapide™ is a multifilament material and is completely resorbed within forty two days and does not retain a tensile strength 14 days postpartum [6].

## Patients and methods

This was a randomized prospective study that was made in Aljazeera hospital and Alsalam international hospital and Alsafwa Hospital, Egypt in the period from January 2017 till March 2018. 160 pregnant ladies were recruited to share in this study, and were consented before sharing in the study, The Allocation and Randomization; a computer generated randomization table was used for allocation in each study arm implementing a closed envelope system opened by operating room nurse during the time of randomization. The randomization allocation was 1:1. The two groups were randomly selected, 200 in each group. Eight cases dropped out follow up and did not come to the hospital to follow post-delivery, so they were excluded from the study and 152

cases continue the study. All patients were delivered by normal vaginal delivery and a mediolateral episiotomy was made and then closure of the episiotomy was done using either a continous or inverted interrupted technique according to the group. Neither the patient nor the outcome assessor know the technique of closure. In the regular follow up of patients, they were asked about the pain after 48 hours and 10 days post-delivery.

### Results

This was a randomized prospective study that was made in Aljazeera hospital and Alsalam international hospital and Alsafwa Hospital, Egypt in the period from January 2017 till March 2018. 160 pregnant ladies were recruited to share in this study, and were consented before sharing in the study (Table 1, 2, 3 and 4), (Figure 1, 2, 3, 4, 5, 6 and 7).

		Count	%
Technique Of Closure	Inverted Interrupted	76	50.0%
	Continous	76	50.0%
Gravidity & Parity	Primigravida	152	100.0%
Postpartum Pain At 48 Hrs.	Yes	52	34.2%
	No	100	65.8%
Postoperative Pain At 10 Days	Yes	32	21.1%
	No	120	78.9%

Table 1: Description of all patients included in the study

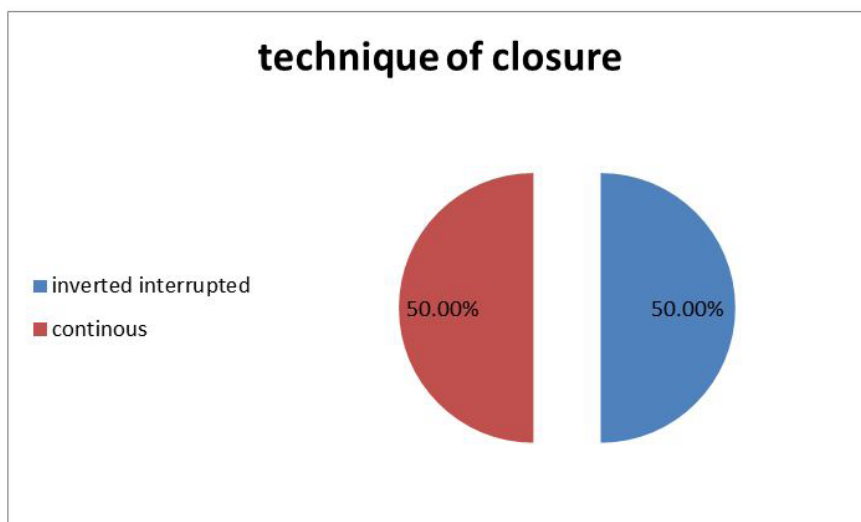


Figure 1: Shows the percent of cases with inverted technique and continous technique of episiotomy closure

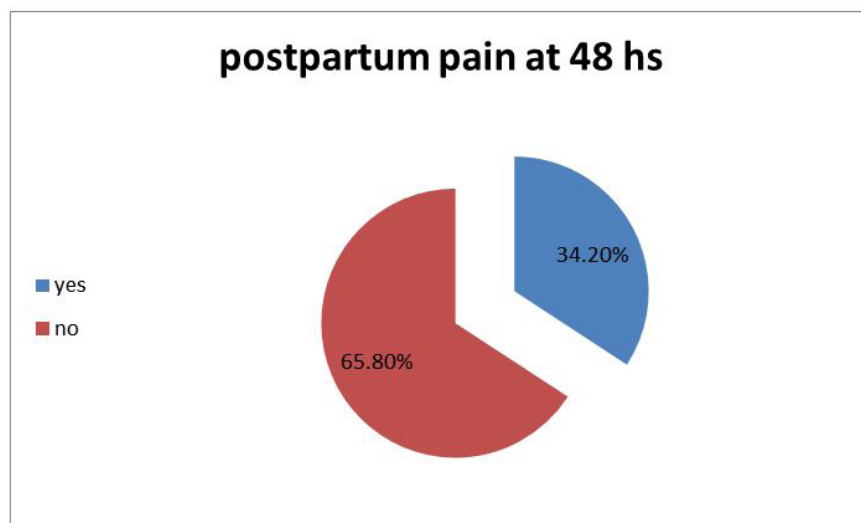


Figure 2: Shows the percent of cases who have postpartum pain among all cases

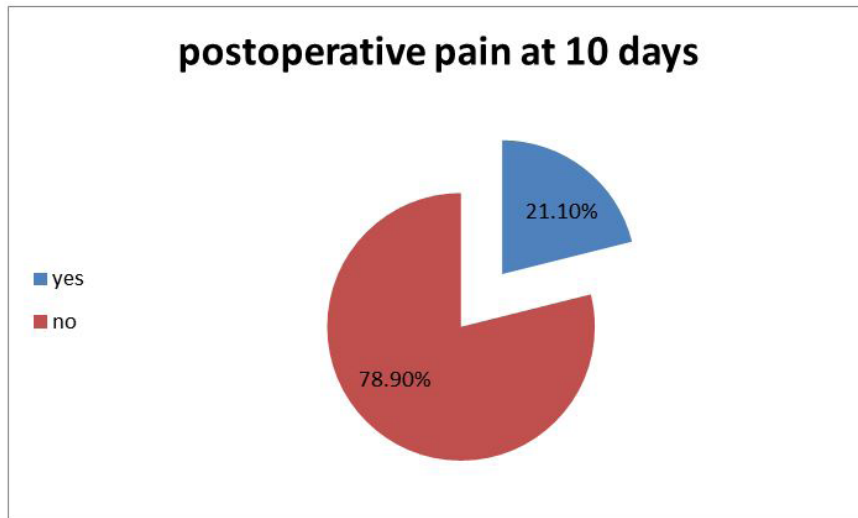


Figure 3: Shows the percent of cases who have postoperative pain after 10 days

	Mean	Standard Deviation
Age	28.18	5.36
BMI	21.78	1.82
Length Of Delivery (Hours)	11.96	3.16
Blood Loss (Cc)	597.37	147.81
Number Of Sutures	7.55	.80

Table 2: Shows demographic data regarding age, BMI, length of delivery, blood loss and number of sutures

	Technique Of Closure				P value
	Inverted interrupted		Continous		
	Mean	Standard Deviation	Mean	Standard Deviation	
Age	27.34	4.88	29.03	5.71	0.053
BMI	21.91	1.85	21.66	1.79	0.399
Length of delivery (hours)	12.32	2.89	11.61	3.39	0.166
Blood loss (cc)	550.00	140.00	644.74	140.85	<0.001
Number of sutures	7.39	.88	7.71	.69	0.015

Table 3: Comparison between Inverted and continous groups

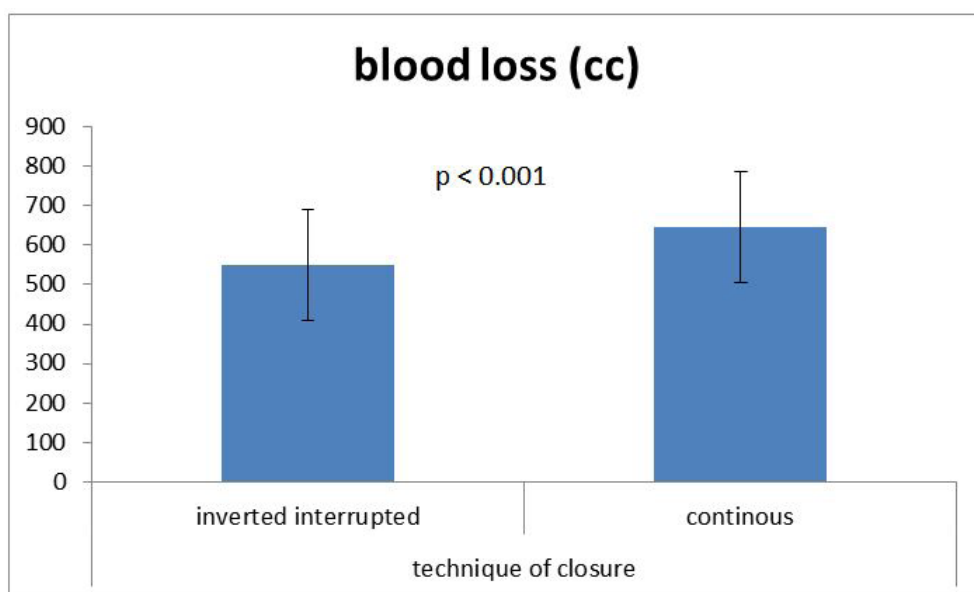


Figure 4: Figure showing mean±SD OF blood loss in the 2 groups

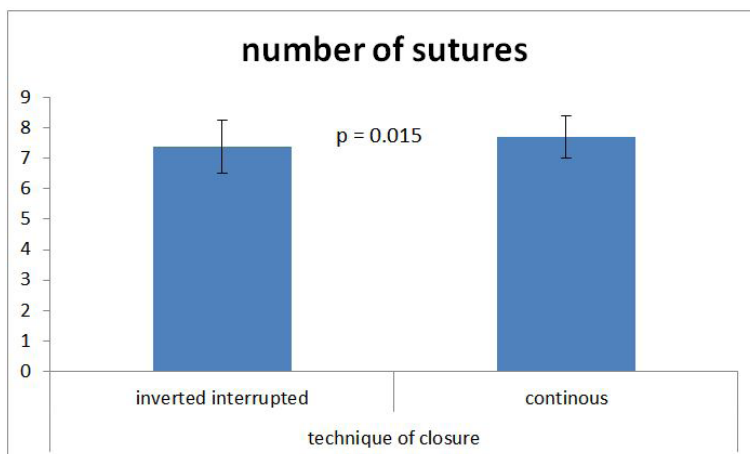


Figure 5: Showing mean±SD of number of sutures in the 2 groups

	Technique of Closure					P value
	Inverted Interrupted		Continous			
	Count	%	Count	%		
Postpartum Pain At 48 Hs	Yes	18	23.7%	34	44.7%	0.006
	No	58	76.3%	42	55.3%	
Postoperative Pain At 10 Days	Yes	8	10.5%	24	31.6%	0.001
	No	68	89.5%	52	68.4%	

Table 4: Shows a comparison between interrupted versus continous group regarding postoperative pain at 48 hours and 10 days

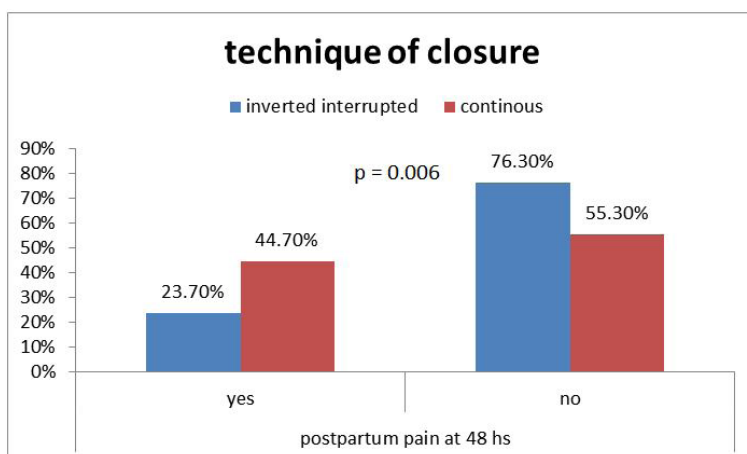


Figure 6: Showing postpartum pain at 48 hours in the 2 groups

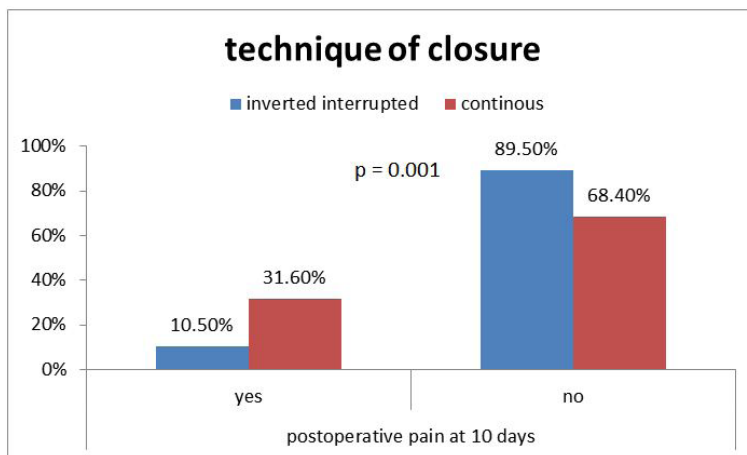


Figure 7: Showing postpartum pain at 10days in the 2 groups

## Statistical Methods

Data were coded and entered using the statistical package SPSS version 25. Data was summarized using mean and standard deviation for quantitative variables and frequencies (number of cases) and relative frequencies (percentages) for categorical variables. Comparisons between groups were done using unpaired t test (*Chan, 2003a*). For comparing categorical data, Chi square ( $\chi^2$ ) test was performed. Exact test was used instead when the expected frequency is less than 5 (*Chan, 2003b*). P-values less than 0.05 were considered as statistically significant [7,8].

## Discussion

In the present study, the number of sutures was statistically significant with a P value less than 0.15, indicating that in cases with a lesser number of sutures, they experienced less pain and this was more in inverted interrupted group. In agreement with our research there was a study made by Rubina Iqbal *et al.* in 2012, he found more pain on day 0 in continuous group. Pain at day 10 in interrupted group was found to be higher as compared to continuous group. This benefit of continuous technique was consistently found in another study regarding pain associated with daily activities, suture material or skill of operator [9]. In contrast to our study, Southmead perineal suture study concluded no change in between the subcuticular and interrupted sutures results [10]. In the present study, there was a significant difference between the postpartum pains after 48 hours in the interrupted group when compared to the continuous group with a P value 0.006. RCOG 2004 guideline also given level A gradation to the use of continuous subcuticular technique for perineal skin closure and a loose, continuous nonlocking suturing technique to oppose vaginal tissue and perineal muscle as it is associated with less short term pain compared with the interrupted method [11]. Also in the present study, In the present study, There was a significant difference between the postpartum pain after 10 days in the interrupted group when compared to the continuous group with a P value 0.006. In Pakistan, Perveen & Shabbir, compared the methods of closure in interrupted and continuous closure ways of episiotomy on the 10th day and the 6th week postpartum. Similar to our results, they failed to find a significant discrepancy in the rate of healing of wound [12]. The results of a previous study made by Biswas Som and Biswas Srirupa in 2017. Showed that the rate of repair of episiotomy and the severity of pain were the same in both groups (interrupted and continuous) [13]. In a study by Perumal D *et al.*, only 19.2% of the study group experienced severe pain, compared to 80.8% of the control group. Pain started to improve from third day onwards [14]. In a study done by Bose E *et al.* 7wound gaping (Dehiscence) was recorded in five women sutured with CC, whereas, none of the women sutured with VR showed gaping of their episiotomy wound [15].

## Conclusion

Our study revealed that there was a significant difference in the outcome of postoperative pain between primigravida who delivered with closure of episiotomy with inverted interrupted sutures with less number of patients who experienced postoperative pain than the ladies with episiotomy was closed by continuous technique especially when the interrupted technique was associated with less number of sutures.

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