

Comparison of the Efficacy (In Terms of No Pain) of Continuous and Interrupted Suturing in Episiotomy Repair

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ABSTRACT

Objective: To compare the efficacy (in terms of no pain) of continuous and interrupted suturing in episiotomy repair.

Materials & Methods: This randomized controlled trial was done at department of Obstetrics & Gynaecology, Civil Hospital, Bahawalpur during a period of six months from 7th November 2019 to 6th May 2020. Women with singleton pregnancy women who underwent episiotomy to facilitate the delivery of the head in the labour room, 20 to 40 years of age were included. Group 1 included the women in which continuous suturing was done while group 2 included the cases in which interrupted suturing was done. In both groups, episiotomy repair was done by the researcher herself. All patients were advised Tab. Diclofenac sodium 50mg 1xBD post-operatively and efficacy was noted after 48 hours by VAS scale.

Results: The mean age of women in group 2 was 27.48 ± 3.59 years and in group 1 was 27.36 ± 3.52 years. Majority of the patients 75 (75.0%) were between 20 and 30 years of age. The mean gestational age of group 2 was 39.48 ± 1.27 weeks and in group 1 was 39.38 ± 1.28 weeks. Efficacy (in terms of no pain) was seen in 18 (36.0%) patients in Group 2 (interrupted group) while in Group 1 (continuous), it was seen in 36 (72.0%) patients with p-value of 0.0001.

Conclusion: continuous suturing of episiotomy repair was observed to be the most effective in terms of significant less post-operative pain compared to interrupted suturing.

Keywords: Episiotomy, continuous suturing, perineal pain

INTRODUCTION

During childbirth, episiotomy is a surgical expansion of the perineum to expand the vulval outlet. Around 85% of females who give birth naturally will experience some type of perineal damage, with up to 69 percent requiring sutures.¹ The following are some of the advantages of episiotomies: accelerates labour, prevents vaginal tears, prevents incontinence, prevents pelvic floor relaxing, and heals faster than tears.² Regardless of the method used to close incisions of the episiotomies, hemostasis and restoration of the anatomical structure of the incision site without the use of extra suture are critical components of success.³ Perineal surgery causes more pain and suffering during postpartum recuperation, as well as interferes with routine activities. It even has an impact on the mother-infant relationship.⁶ Efforts to reduce morbidity from post-episiotomy perineal pain included, adoption in technique of repair, a type of suture material used and the skill of the operator.⁷ The types of utilized material of the sutures for perineal healing could affect how much discomfort, superficial dyspareunia and wound dehiscence, patients experience after delivery.⁶ Absorbable and non-absorbable suture materials are utilized. The optimum procedure for the repair episiotomies would be one that requires less time and uses fewer materials, as well as one that causes less discomfort in the short term and long term, allowing for fast and so less painful re-continuation of intercourse and needing less suture removal and re-suturing.^{4,5} Regardless of the method used to repair the incisions of episiotomies, hemostasis and the recovery of the anatomical structure of the site of incision without the use of additional sutures are critical components of success. Currently, there are two types of mending methods: continuous and interrupted.⁴ In the literature, it has been indicated that continuous non-locking suture procedures for vaginal, perineal muscle, and skin restoration are considerably superior to standard interrupted approaches in terms of reducing postpartum pain, although the continuous method has yet to be widely adopted.^{5,6} Perineal pain after episiotomy repair has been the most prevalent mothers complaint, and it not only impacts the woman physiologically, but that's linked to a high rate of maternal morbidity. Several studies have shown different findings.⁷⁻¹⁰ so this study aims to compare the efficacy (in terms of no pain) of continuous and interrupted suturing in episiotomy repair. This study will not only add up the local data to the existing literature but also, can provide our population with a more efficacious method of suturing for episiotomy repair.

MATERIAL AND METHODS

The randomized controlled trial was done at department of Obstetrics & Gynaecology, Civil Hospital, Bahawalpur, during a period of six months from 7th November 2019 to 6th May 2020. Non-probability, consecutive sampling was used. All women underwent episiotomies to facilitate the delivery of the head in the labour room, age 20-40 years, singleton pregnancy of cephalic presentation, term pregnancy, both primiparous and multiparous were included. All the cases having previous perineal surgery, females underwent instrumental vaginal delivery, females having fever or any infection, history of diabetes mellitus and women with chronic renal failure were excluded. The selected patients were then divided into two equal groups (1 & 2) by the lottery method. All selected instances were given the option of picking a slip from a total of mixed-up slips (half of the slips had letter '1', while the other half contained letter '2'), and she was assigned to that group. Group 1 included the women in which continuous suturing was done while group 2 included the cases in which interrupted suturing was done. In both groups, episiotomy repair was done by the researcher herself. All patients were advised tablet Diclofenac sodium 50mg 1xBD post-operatively and efficacy was noted after 48 hours by VAS scale. All of the information was recorded into a specially modified proforma. SPSS version 26.0 has been used to enter and analyse all of the data.

RESULTS

A total of 100 women were comparatively studied and their overall mean age was 27.42 ± 3.53 years. The average age of women in groups 2 and 1 was 27.48 3.59 years and 27.36 3.52 years, respectively. The majority of the patients (75%) were between the ages of 20 and 30. The average gestational age of groups 2 and 1 was 39.48 1.27 weeks and 39.38 1.28 weeks, respectively. The mean parity in groups 2 and 1 was 2.64 0.94 and 2.58 0.97, respectively, and the distribution of patients by episiotomy type and residence is shown in table 1.

Efficacy was observed in 18 (36.0%) of the cases in Group 2, while in Group 1 efficacy was note 72.0% of the cases (p-0.0001). Table.2

Efficacy with respect to the age, gestational age, parity and type of episiotomy was observed to be statistically significant, p-values were quite significant table.3

Table 1: Descriptive statistics of demographic data and types of episiotomies in both groups n=100

Variables		Study groups	
		Group 2	Group 1
Age (years)		27.48 ± 3.59	27.36 ± 3.52
Gestational age (weeks)		39.48 ± 1.27	39.38 ± 1.28
Parity		2.64 ± 0.94	2.58 ± 0.97
Type of episiotomy	Midline	31(62.0%)	30(60.0%)
	Mediolateral	19(38.0%)	20(40.0%)
Residency	Rural	28(56.0%)	29(58.0%)
	Urban	22(44.0%)	21(42.0%)

Group 1= Continuous group, Group 2= Interrupted group

Table 2: Comparison of efficacy between both groups n=100

Variables		Study groups		p-value
		Group 2	Group 1	
EFFICACY	Yes	18(36.0%)	36(72.0%)	0.0001
	No	32(64.0%)	14(28.0%)	
Total		50(100.0%)	50(100.0%)	

Group 1= Continuous group, Group 2= Interrupted group

Table 3: Efficacy with respect to age, gestational ag, parity and type of episiotomy in both groups n=100

Variables		Group 2		Group 1		p-value
		Efficacy		Efficacy		
		Yes	No	Yes	No	
Age groups (years)	18-30	15	23	25	12	0.015
	31-40	03	09	11	02	0.003
Gestational age	37-39	09	15	18	07	0.015
	40-41	09	17	18	07	0.007
Parity	1-3	14	27	38	13	0.001
	4-5	04	05	08	01	0.046
Type of episiotomy	Midline	12	19	20	10	0.029
	Mediolateral	06	13	16	04	0.002

Group 1= Continuous group, Group 2= Interrupted group

DISCUSSION

The optimum procedure for episiotomy repairs would be one that takes less time and uses fewer materials, as well as one that causes less discomfort in the short and long term, enabling for a fast and less painful resumption of sexual activity and needing less suture removal and resuturing.¹¹ This study has been done to compare the efficacy (in terms of no pain) of continuous and interrupted suturing in episiotomy repair and overall mean age of the cases 27.42 ± 3.53 years, particularly in group 2 was 27.48 ± 3.59 years and in group 1 27.36 ± 3.52 years. We found efficacy (in terms of no pain) was seen in 18 (36.0%) patients in Group 2 (interrupted group) whereas in Group 1 (continuous), it was seen in 36 (72.0%) patients with p-value of 0.0001. Jena L et al⁷ in his study has found a significant difference in the post - episiotomy repair pain between the interrupted versus continuous suturing groups (51.9% vs 20.0%). In a local study, pain was in 83.0% of the cases of interrupted group, compared to 37.0% cases of continuous group (P- 0.000).⁹ Another local study has found that using continuous or interrupted procedures for repair of 2nd degree perineal tears or episiotomy had no significant difference in the occurrence or level of discomfort (slight/severe).⁹ In another study, it was seen that 58.0% subjects in the interrupted group had pain in comparison to 12.0% in the continuous group.¹⁰ A prospective comparative study¹² comprised 141 women in two groups and demonstrated that the continuous technique (CT) group had lower perineal pain levels during laying, walking and sitting on the second day after delivery than the interrupted technique group (p-0.009), furthermore CT group had significantly decreased perineal pain during walking and sitting on the 10th day after birth (p-0.027).¹² In a meta-analysis, Kettle C et colleagues found that continuous suture procedures for perineal closure are related to decreased pain for up to 10 days after delivery compared with interrupted suture approaches.¹³ Kettle C et al found that on the 10th day, women who had continuous technique reported significantly less discomfort than those who underwent interrupted technique (p0.0001).¹⁴ Morano S et al also found that

with the continuous knotless procedure, women experienced considerably less pain after 10 days than with the interrupted technique (p0.001).¹⁵ Inconsistently in a randomized controlled trial reported that there were no significant differences in discomfort between these repair approaches compared with the interrupted technique (p0.001).¹⁶ While in Turkey in a study observed that in the short term assessment, the continuous suture approach was linked to less pain.¹⁷ However, clinical research in India during 2017 on 200 females found no difference between the both suture procedures in terms of pain on the 2nd day, 10th day and 90th day, while this study did not look at other events.¹⁸ Another study found statistically significant differences between continuous and interrupted groups on the basis of thread size measured in centimeters, wound suturing duration, measurement of the perineal pain after 12 and 48 hours after birth, analgesic needs only for 48 hours after birth, wound healing duration, dyspareunia duration after 60 days and after 4 120 days.¹⁹ In another study, when the continuous and interrupted suture procedures were compared, the interrupted suture technique caused higher pain.²⁰ On the other hand, Lopamudra et al²¹ demonstrated that the procedure of continuous sutures 2nd degree perineal tear and episiotomy repair was linked to lower short-term pain, little uses of the suture material and dyspareunia, while there was no variation in daily activities after 42 days and wound dehiscence occurrence.²¹ Three-layer procedure in which the continuous running stitch was used for suturing of the vaginal mucosa, was the conventional method for episiotomy healing. The muscle layer was sutured with interrupted sutures divided into two layers, and the skin layer was sutured with subcuticular sutures. At the vaginal mucosal apex, only one knot is knotted. in the continuous procedure. After that, the vaginal wall is repaired by the continuous running stitch. To reach the end of the incision, the same stitch is continued in the muscles and then carried in the skin with subcuticular sutures.²² The continuous suturing approach for perineal healing is linked to less short-term pain than the interrupted approach.²³ Because continuous suturing requires substantially less suturing material than interrupted suturing, it is particularly cost effective, especially in resource-constrained settings. Suturing that is continuous takes less time.²⁶

CONCLUSION

As per study conclusion, continuous suturing of episiotomy repair was observed to be the most effective in terms of significant less post-operative pain compared to interrupted suturing. Therefore, it is recommended that continuous suturing suture should be used as the primary method for episiotomy repair in order to reduce maternal morbidity.

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