Comparison of Efficacy of Continuous Versus Interrupted Suturing Technique in Episiotomy

SADAF-UN-NISA, SHAMAS-UN-NISA, MEHAR-UN-NISA

ABSTRACT

Aims: To compare the efficacy of continuous versus interrupted suturing technique in episiotomy.
Study design: It was Randomized Controlled Trial.
Duration: The study was conducted from January 2009 to September 2009.
Settings: Department of Obstetrics and Gynaecology Unit-I, Bahawal Victoria Hospital, affiliated with Quaid-e-Azam Medical College, Bahawalpur.
Methods: A total of one hundred patients (50 in each group) with singleton vaginal pregnancy, were included in the study.
Results: In our study, 76%(n=38) in continuous and 80%(n=40) in Interrupted group were between 20-30 years of age while 24%(n=12) in continuous and 20%(n=10) in interrupted group were between 31-35 years of age, mean±sd was calculated as 27.34±4.65 years, while comparison of efficacy was recorded in both groups, which shows that 42%(n=21) in continuous and 76%(n=38) in interrupted group were suffering with pain while 58%(n=29) in continuous and 24%(n=12) in interrupted group had no pain, p value was recorded as 0.000 which shows a significant difference in both groups.
Conclusion: We concluded that efficacy of continuous suturing technique is significantly higher as compare to interrupted suturing technique for episiotomy after vaginal delivery in terms of perineal pain.
Keywords: Perineal trauma, perineal pain, episiotomy, continuous suture, interrupted suture, efficacy.

INTRODUCTION

Episiotomy is among the most common surgical procedures experienced by women of reproductive age group.1 Thirty percent to 35% of vaginal births include episiotomy2,3. Professional opinions and practice patterns varies widely about maternal risks and benefits associated with its routine use4.

Although the current tendency is to reduce the incidence of episiotomies5 but its practice varies considerably depending on population. Despite this, repair of the perineum continues to be an aspect of childbirth that affects a great number of women and can produce maternal morbidity. The majority of women experience pain of short duration as a result of perineal repair after birth and some continue with long-term problems, such as sexual discomfort6.

Morbidity associated with it may effects women physical, psychological and social well being both in the immediate and long term postnatal period6. It is associated with short and long term complications. Short term complications include hemorrhage, paragenital hematoma formation, perineal pain, sepsis. Long term complications including dysparunea, incontinence of flatus and feaces6.

In addition to the extent of the trauma, the surgical skill, the type of material used, and the suture technique for perineal repair after childbirth can have an important effect on the magnitude and degree of morbidity experienced by women after repair7.

The best technique for perineal repair would require less time to perform and less use of materials and that which produces less pain in the short and long term7. In relation to suture techniques a continuous suture technique for approximating second degree lacerations and episiotomies has been documented to be less painful and causes less need for subsequent suture material removal than interrupted stitches including closure of perineal skin.

In our setup both the techniques are used but the effective technique is not recorded. In this study we compared the efficacy of these techniques to establish the appropriate suturing technique for perineal repair so that best technique may be determined and used in future.

MATERIAL AND METHODS

In this randomized controlled trial, 50 patients in each group nulliparous women having singleton pregnancy, sustained episiotomy or second degree perineal laceration were included, while twin/triple pregnancies undergoing instrumental delivery having
perineal injury involving the anal sphincter and/or anal mucosa, previous perineal surgery were excluded from the study. Randomization was computer based. Each patient was asked to pick one draw and she was included in that group (A or B). Group-A patients were repaired with Continuous Suturing technique which involved continuous non locking suture to close the vaginal mucosa and the muscular layer of the perineum. In Group-B patients were repaired by Interrupted Suturing technique involving continuous non locking suture to close the vaginal mucosa ending the hymenial ring. Two or four interrupted stitches were applied to the muscular layer of the perineum. The perineal skin is approximated using interrupted sutures.

No comments were made about technique during delivery or during outcome assessment sessions to control the effect modifiers. Participants were questioned regarding the sensation of pain and the use of painkillers on the second and tenth postnatal day. Structured interviews were performed by a post graduate trainee blinded to treatment allocations. Pain was evaluated using a visual analogous scale and results were analyzed at 24 hours and 7th postpartum day. Patient was advised to come for follow up at ten days after delivery the same questions were asked by same postgraduate trainee who conducted interview before hence interviewer’s bias were controlled. For this purpose telephonic contact of the patient was taken.

The data was collected and entered in SPSS version 15. Mean and standard deviation for numerical data i.e., age was calculated. Qualitative data like episiotomy/perineal tear, continuous/ interrupted suturing technique and postpartum pain was expressed as frequency or percentage. Chi-square test was used to compare pain in both groups at 24 hours and day 7. P-value ≤0.05 was considered as significant.

RESULTS

Age distribution of the patients was done which shows that 38(76%) in continuous and 40(80%) in Interrupted group were between 20-30 years of age while 12(24%) in continuous and 10(20%) in interrupted group were between 31-35 years of age, mean±sd was calculated as 27.34±4.65 years. (Table 1)

Table 1: Age Distribution (n=100)

<table>
<thead>
<tr>
<th>Age (Yrs)</th>
<th>Continuous</th>
<th>Interrupted</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>20-30</td>
<td>38</td>
<td>76</td>
</tr>
<tr>
<td>31-35</td>
<td>12</td>
<td>24</td>
</tr>
<tr>
<td>Mean±sd:</td>
<td>27.34±4.65</td>
<td></td>
</tr>
</tbody>
</table>

Comparison of efficacy was recorded in both groups, which shows that 21(42%) in continuous and 38(76%) in interrupted group were suffering with pain while 29(58%) in continuous and 12(24%) in interrupted group had no pain, p value was recorded as 0.000 which shows a significant difference in both groups. (Table 2)

Table 2: Comparison of Efficacy (n=100)

<table>
<thead>
<tr>
<th>Pain</th>
<th>Continuous</th>
<th>Interrupted</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Yes</td>
<td>21</td>
<td>42</td>
</tr>
<tr>
<td>No</td>
<td>29</td>
<td>58</td>
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</table>

P value=0.000

DISCUSSION

Episiotomy is a surgical incision given in the perineum to increase the diameter of the vulval outlet during childbirth. It causes surgical reduction of resistance offered by the pelvic floor. It is an intentional second degree perineal tear. It is among the most common surgical procedures experienced by women in United States. 30-35% of vaginal births include episiotomy. Morbidity associated with it may effect women physical, psychological and social well being both in the immediate and long term postnatal period.

For nearly 70 years, researchers have been suggesting that continuous repair techniques are better than interrupted suture methods in terms of reported postpartum pain, but in developed countries, the most frequent technique used is the interrupted one. In our setup both the techniques are used but the effective technique is not recorded, so this study was conducted.

In our study, 38(76%) in continuous and 40(80%) in Interrupted group were between 20-30 years of age while 12(24%) in continuous and 10(20%) in interrupted group were between 31-35 years of age, mean±sd was calculated as 27.34±4.65 years, while comparison of efficacy was recorded in both groups, which shows that 21(42%) in continuous and 38(76%) in interrupted group were suffering with pain while 29(58%) in continuous and 12(24%) in interrupted group had no pain, p value was recorded as 0.000 which shows a significant difference in both groups.

The findings of the study are in agreement with Kettle C and colleagues who recorded that by using two suture materials (quick absorption and standard) and found that less pain was experienced with the continuous suture technique and similarly another study in 2007 the continuous suture technique was found to be associated with less pain in the short term compared with the discontinuous technique.
Another study conducted by Morano and co-workers\textsuperscript{14} to compare the continuous knotless technique of perineal repair with the interrupted method after spontaneous vaginal birth showed that the primary outcomes of the study were perineal pain (evaluated by visual analogue scale) at 48 hours and day 10 after delivery. Significantly fewer women reported pain at 10 days with the CKT than with the IT (32.3\% vs 60.4\%; p .001). Analgesia use up to 48 hours postpartum was less in the CKT group than in the IT group (33.6\% vs 54.2\%; p .05).

However, the results of the current study and other studies are in favour of continuous technique.

**CONCLUSION**

Comparison of efficacy of continuous versus interrupted suturing technique in episiotomy after vaginal delivery in terms of perineal pain recorded less pain in continuous suturing technique as compared to interrupted suturing technique.

**REFERENCES**