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# COMPARATIVE STUDY ON EPISIOTOMY SUTURING TECHNIQUES - CONTINUOUS VS INTERMITTENT METHOD

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## ABSTRACT

**AIM:** To compare the efficacy between the two techniques of episiotomy suturing- continuous Vs intermittent.

**MATERIALS AND METHODS:** This is a prospective randomized control study conducted in 100 labouring women who underwent labour natural with episiotomy. They were divided into two groups of 50 each and were sutured using either continuous or Intermittent technique with vicryl rapide.

**RESULTS:** The number of Primi and Multi was 16 (32%) and 34 (68%) in intermittent group and 16 (32%) and 34 (68%) in continuous group.The mean age was 23.98+/-3.47 and 24.88+/-3.2 in the continuous and intermittent group respectively. The mean time taken for suturing was 22.2 ± 5.55 and 25.4 ± 5.13minutes in the continuous and intermittent groups respectively which is statistically significant difference..4%and 0% had Pain at 2 days in the intermittent and continuous groups respectively.The difference is not significant. None of them in both groups developed fever, haematoma,wound infection,wound dehiscence or needed analgesics at 2nd or 7th day.

**CONCLUSION:** Continuous suturing technique is superior to interrupted method considering the advantages of lesser pain and lesser time taken for suturing.

**KEYWORDS** : Episiotomy , suturing technique

## INTRODUCTION:

Episiotomy was introduced about 200 years earlier, but became accepted by most obstetricians only after Pomeroy's study in 1918.There has been much debate over the use of episiotomy over the past decades.There are 4 types of episiotomy-mediolateral, lateral,median and J-shaped. The median , previously used is avoided nowadays due to increased chances of extension to the anal sphincters and CPT. The lateral incision is one which begins from the fourchette and extends laterally,not used widely due to its chances of causing injury to the Bartholin'sduct. The mediolateral is the most commonly used one these days and its is directed at an angle of about 30-45 degree from midline,almost midway between the ischial tuberosity and the anus. The muscles cut during episiotomy are the bulbospongiosus,superficial and deep transverse perineii. This mediolateral avoiding the perineal body is the one used commonly.

Whilst few studies show that episiotomy decreases the chance of complete perineal tear especially in primigravidas few other studies have concluded that there are chances of episiotomy extensions causing CPT and that the perineal tears occurring in,well monitored deliveries cause lesser perineal trauma than an episiotomy cut. There are also complaints from patients that episiotomy causes more pain and dyspareunia and may complicate sexual intercourse.

The initial widely used material for episiotomy was chromic catgut, but now is being replaced more and more by synthetic absorbable sutures due to their lesser chance of reactions than catgut. Materials like polyglactin have gained popularity.

Episiotomy can be sutured using the intermittent or the continuous technique . The longer time taken for suturing and more knots placed found to hinder wound healing is considered as the disadvantage of the intermittent method.

In the intermittent suturing, first a bite of suture is taken over 1 cm above the apex of the episiotomy wound and a knot tied. Then a continuous interlocking suture is done for the mucosa. The perineal muscles are then sutured separately with intermittent sutures.The skin is sutured with mattress sutures.

In the continuous suturing method, after the mucosa is sutured, the muscles are approximated with continuous non locking sutures and the skin is closed by subcuticular stitches without cutting the suture material any where inbetween.

## AIM:

The aim of the study is to compare the efficacy between the two techniques of episiotomy suturing- continuous Vs intermittent.

## MATERIALS AND METHODS:

This study is a prospective randomized control study conducted in women admitted in the labour ward in Government Mohan Kumaramangalam Medical College Hospital,Salem,Tamilnadu , during the period of January 2017 to June 2017 who underwent labour natural with episiotomy.

All women admitted with labour pains needing an episiotomy, in the age group of 18-30 years were included in the study. 100 labouring women were divided into two groups of 50 each. The two groups were assigned episiotomy suturing as either

1. Continuous technique using vicryl rapide
2. Intermittent technique using vicryl rapide

Written consent was obtained from the patients included in the study.Patients with the following conditions were excluded from the study.

1. Intrapartum fever
2. Cervical tear
3. Extension of episiotomy
4. Anemia
5. Gestational diabetes mellitus
6. Severe pre-eclampsia
7. HIV and Hep-B positive
8. IUD
9. Cases handled outside

The women included in the study were assigned either one of the groups for episiotomy and sutured using vicryl rapide 2-0 36mm round bodied ½ circle . They were sutured with either of the techniques- intermittent suturing or continuous suturing. Episiotomy was sutured by the same senior resident trained in episiotomy suturing who was instructed to follow one of the two techniques on alternate days.

All the episiotomy repairs were done after infiltration with a local anesthetic lignocaine hydrochloride 2% after test dose. General asepsis was maintained while performing the episiotomy. Episiotomy was given when the baby's head was crowning and the perineum was well thinned out.

Keeping two fingers between the fetal head and the perineum a cut about 4-5 cm in the mediolateral direction was made. The fetal head and the shoulders delivered in a well controlled manner with good perineal support, so that extension of episiotomy is avoided.

After delivery of placenta the perineum is thoroughly examined for any lacerations,extension of the cut or excess bleeding elsewhere. Patients were given T. ibuprofen 200 mg tds and c.amoxycillin 500 mg tds for 5 days .

During suturing , the time taken from start of mucosal suturing to end upto the skin was noted.The women were followed up in the postnatal ward on day 2 and day 7 and looked for fever, pain,need for analgesics,haematoma formation,signs of wound infection like edema/induration , redness and wound discharge and wound dehiscence. The pain was measured using an oral analogue scale.

## RESULTS:

Among the study population no.of episiotomies sutured with intermittent and continuous methods were 50(50%), and 50(50%) respectively.

The number of Primi and Multi was 16 (32%) and 34 (68%) in intermittent group. The number of Primi and Multi was 16 (32%) and 34 (68%) in continuous group and it is comparable in both groups.The mean age was 23.98+/-3.47 and24.88+/-3.2 in the continuous and in the intermittent group respectively.The difference between them is not statistically significant.((p value 0.151).

The mean time taken for suturing in continuous method group was 22.2 ± 5.55 minutes and in the intermittent group was 25.4 ± 5.13minutes. The difference between two groups was statistically significant (p value 0.003).

4% had Pain at 2 days in the intermittent method group but none had pain in the continuous group. The difference is not significant (P value 0.15).None of them in both groups developed haematoma at 2nd or 7th day.Similarly none needed analgesics at 2nd or 7th day in both groups.None developed fever in both groups as is the wound infection both at 2nd and at 7th day.

**Table 1: Comparison of mean Time taken for suturing (in min) across study groups (N=100)**

| study group | Time taken for suturing (in min) Mean± STD | Mean difference | 95% CI | | P value |
|---|---|---|---|---|---|
| | | | Lower | Upper | |
| Continuous suturing | 22.2 ± 5.55 | -3.20 | -5.32 | -1.08 | 0.003 |
| Intermittent suturing | 25.4 ± 5.13 | | | | |

## DISCUSSION:

Episiotomy is one of the most commonly performed minor surgery in the department of obstetrics.Restricted episiotomy rather than universal episiotomy is the dictim followed in recent times.

Several studies have been conducted on the different methods of suturing episiotomy.

**Table 2**

| Parameters | | Intermittent method | Continuous modeth |
|---|---|---|---|
| **Pain at 2 Days** | Yes | 2(4%) | 0 (0%) |
| | No | 48 (96%) | 50 (100%) |
| **Need for analgesics at 2days** | Yes | 0 (0%) | 0 (0%) |
| | No | 50 (100%) | 50(100%) |
| **Wound haematoma 2 Days** | Yes | 0 (0%) | 0 (0%) |
| | No | 50 (100%) | 50 (100%) |
| **Fever at 2 Days** | Yes | 0 (0%) | 0 (0%) |
| | No | 50 (100%) | 50 (100%) |
| **Wound infection at 2days** | No | 50 (100%) | 50 (100%) |
| | Yes | 0 (0%) | 0 (0%) |
| **Wound dehiscence at 2days** | Yes | 0 (0%) | 0 (0%) |
| | No | 50 (100%) | 50 (100%) |
| **Pain at 7days** | Yes | 0 (0%) | 0 (0%) |
| | No | 50 (100%) | 50 (100%) |
| **Need for analgesics at 7days** | Yes | 0 (0%) | 0 (0%) |
| | No | 50(100%) | 50 (100%) |
| **Wound haematoma at 7days** | Yes | 0 (0%) | 0 (0%) |
| | No | 50 (100%) | 50 (100%) |
| **Fever at 7days** | Yes | 0 (0%) | 0 (0%) |
| | No | 50 (100%) | 50 (100%) |
| **Wound infection at 7days** | Yes | 0 (0%) | 0 (0%) |
| | No | 50 (100%) | 50 (100%) |
| **Wound dehiscence at 7days** | Yes | 0 (0%) | 0 (0%) |
| | No | 50 (100%) | 50 (100%) |

*No statistical test was applied where there is "0" subject in any of the cells.

Kettle et al carried out a trial comparing the two techniques of episiotomy repair (continuous and discontinuous) using two suture materials (quick absorption and standard) and found that less pain was experienced with the continuous suture technique.

Almeida SF,Rieco MI compared the continuous and interrupted techniques and found more pain in interrupted suture technique.In the study done by JenA et al in 2015 , concluded that continuous suturing is better because it causes less pain and takes lesser time for suturing as in the study conducted by Aditi et al.

In our study there was no significant difference in the groups in terms of mean age and parity. When the time taken for suturing was compared, the continuous technique group took lesser time. In Table 1 the time taken for suturing, show that the intermittent suturing took an average of about 25 mins to suture whereas the continuous suturing technique took only about 22mins. . The P-Value is <0.001 which is statistically significant .This result is similar to that of other studies .Most of these these studies also concluded that the amount of material needed is lesser in the continuous group suggesting the continuous technique is more economical.

There is significant difference in the pain perception ,pain being less in continuous group in almost all similar studies.In our study though there is more pain at 2nd day in the interrupted group, the difference is not statistically significant.

When comparing the other parameters, the results are similar in both intermittent and continuous groups,None of the patients had the need for analgesics ,haematoma formation, fever and signs of wound infection at 2nd and 7th day in bothgroups showing that there is no advantage of one technique over the other in terms of these parameters which is similar to the results in other quoted studies.

## CONCLUSION:

Episiotomy is essential in selected cases to prevent morbidity to both mother and the baby.Even though many studies have proven that continuous suturing technique is superior to interrupted method,continuous suturing method is not widely followed in many institutions.It is advisable to follow the continuous method of suturing episiotomy considering the advantages of lesser pain and lesser time taken for suturing.

## REFERENCES:


1. Jena L, Kanungo S. A comparative study of continuous versus interrupted suturing for repair of episiotomy or second degree perineal tear. Int J Reprod Contracept Int J Reprod Contracept Obs Gynecol. 2015;44(1):52–5.
2. Abdullah M, Noreen A, Iqbal M, Sohail r. comparison between chromic catgut and vicryl rapide for analgesia requirement in episiotomy repair in primigravidas. 2015;21(3):193–6.
3. Mandade K, DP B. Comparative Study of Continuous Vs. Intermittent Technique of Episiotomy Suturing in Rural Population of India. Int J Med Sci Clin Invent. 2016;3(10):2281–4.
4. Bahulekar A, Vaswani B, Patange R. Continuous Versus Interrupted Sutures for Episiotomy Wound Repair. J Evol Med Dent Sci. 2016;5(95):7016–8.

5. Kettle C, Johanson R. Continuous versus interrupted sutures for perineal repair. In: Kettle C, editor. Cochrane Database of Systematic Reviews. Chichester, UK: John Wiley & Sons, Ltd; 1998. p. CD000947.
6. Kettle C, Dowswell T, Ismail KM. Continuous and interrupted suturing techniques for repair of episiotomy or second-degree tears. In: Kettle C, editor. Cochrane Database of Systematic Reviews. Chichester, UK: John Wiley & Sons, Ltd; 2012.
7. Machines IB. IBM SPSS Statistics for Windows. Armonk, NY: IBM Corp; 2013.