

**A Comparative Study of Interrupted
Suture Technique Using Chromic
Catgut Versus Polyglactin 910 in
Repair of Episiotomy**

Thesis

*Submitted for partial fulfillment of the Master Degree
In Obstetric and Gynecology*

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قَالُوا سُبْحَانَكَ لَا عِلْمَ لَنَا إِلَّا مَا عَلَّمْتَنَا
إِنَّكَ أَنْتَ الْعَلِيمُ الْحَكِيمُ

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List of Abbreviations

- BMI** : body mass index
- NAS**: numerical analogue scale
- PG** : primigravida
- PRI** : pain rating index
- VAS**: visual analogue scale

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Protocol of Thesis

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Introduction

Perineal trauma may occur spontaneously during childbirth. Large proportion of women 83% experienced perineal trauma, 40% of women had an episiotomy, only 6% had an episiotomy and perineal tear, 37% had perineal and other tears without episiotomy (*Fernando, 2006*).

Perineal repair is one aspect of childbirth and may result in maternal morbidity (*Mccandlish, 1998*). Perineal repair after episiotomy is one of the most common surgical procedures (*Leman et al., 2003*).

Episiotomy is incision of perineum during last part of second stage of labor (*Cunningham et al., 2005*). The purpose is to facilitate completion of second stage of labor to improve maternal and neonatal outcome. Maternal benefits include reduce risk of perineal trauma, pelvic floor dysfunction, prolapse, incontinence and sexual dysfunction (*ACOG, 2006*).

The layers traversed during uncomplicated mediolateral episiotomy are vaginal epithelium, bulb of vestibule, occasionally Bartholin gland, bulbospongiosus, superficial transverse perineal muscle, perineal membrane, urethrovaginal sphincter and transversus perinealis, puborectalis muscle is rarely involved (*Morano et al., 2006*).

Traditional technique of repair includes:- locking stitches inserted to close the vaginal wound commencing above the apex and ending at posterior fourchette. Then approximating the superficial and deep perineal muscle with three to four interrupted sutures. Then closing the skin by interrupted transcutaneous sutures (*Kettle et al., 2009*).

Most women will have perineal pain immediately after delivery about 20% will continue to have long term problems as superficial dyspareunia, pain can be distressing and interfering with mother activities (*Kettle et al., 2002*). Type of suture affect amount of pain and superficial dyspareunia (*Kettle and Jonson, 2001*).

Protocol

Cat gut is manufactured from collagen derived from healthy mammals. It is broken down by proteolytic enzymes and phagocytosis. But catgut treated with chromic to slowdown digestive and inflammatory process loses 1/2 of its strength in 21 days, completely absorbed by the body in 70 days.

While Polyglactin 910 (vicryl) is produced from polymerization of glycolic acid, absorbed by hydrolysis, loses 1/2 of its strength in 21days, induce low degree of inflammation and absorbed after 60-90 days (*Greenberg, 2002*).

Aim of the work

To compare between chromic catgut versus polyglactin 910 in interrupted suture technique after repair of episiotomy

Subjects and Methods

This study will be conducted in Ain Shams University Maternity Hospital labor ward.

Three hundred patients will be recruited from those attending laborward and will be randomly divided into 2 groups.

Method of randomization: randomization allocation will be carried out with sequentially numbered opaque, sealed envelopes containing one of the two sutures names. Woman will be blinded as to which group they are allocated

This will be applied using computer randomized sheet using Microsoft excel.

Group A: 150 cases will undergo episiotomy repair using polygalactin 910 (2/0).

Group B: 150 cases will undergo episiotomy repair using chromic cat gut (2/0).

Inclusion criteria

1. PG.
 2. Age = 20-30 years old.
 3. BMI = 25-30kg/m².
-

4-Singleton pregnancy.

5-Vertex.

6-Hemoglobin 10gm%.

7-Serum albumin 3gm%.

Exclusion criteria:

1. Preexisting vaginal discharge.(infection)
2. Complicated episiotomy or tears.(extention)
3. instrumental delivery.
4. Previous perineal surgery.
5. Any medical disorder with pregnancy.

The following steps will be done:

All patients will be informed as regard the idea of the study and the steps of the procedure, then they will sign a written consent of approval to participate in this research.

All participants will be subjected to:

- (1) History taking: it will be taken in brief to fulfill inclusion criteria
 - (2) General examination.
 - (3) Abdominal examination.
 - (4) Local pelvic examination.
-

Protocol

A mediolateral episiotomy will be done at time of head crowning using scissor after applying local xylocaine 10cm (diluted or not).

The two groups will be repaired with interrupted suture technique, where locking sutures will be taken to close vagina, starting above apex of wound, ending at fourchette. Then three to four interrupted sutures to approximate deep and superficial muscles. Then interrupted transcutaneous sutures to close skin.(kettle et al.,2009)

Type of suturing material:

Group A: TAISIER-MED coated EGYCRYL braided polyglactin 910 (suture number 2/0).

Group B: ETHICON Chromic cat gut (suture number 2/0)

Follow up: each patient will be followed up for:

1. Pain: at day 2 after delivery, day 10, and 6 weeks measured by (VAS) visual analogue scale (VAS well be explained for each before start of the study) .
 2. Need for analgesia up to 48 hrs after delivery
 3. Healing problems(infection ,gaping ,granuloma).
 4. Superficial dysparenia after 6 weeks.
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