

A prospective study to evaluate & compare chromic catgut and vicryl rapide for episiotomy repair in the department of obstetrics & gynaecology, SMS Medical College, Jaipur

¹Dr. Prerna Sharma, IIIrd year resident, Department of Obstetrics and Gynaecology, SMS Medical College, Jaipur

²Dr. Neelam Bhardwaj, Sr. Professor, Department of Obstetrics and Gynaecology, SMS Medical College, Jaipur

³Dr. Parveen, IIIrd year resident, Department of Obstetrics and Gynaecology, SMS Medical College, Jaipur

⁴Dr. Prem Bajya, IIIrd year resident, Department of obstetrics and gynaecology, SMS medical college, Jaipur

Corresponding Author: Dr. Neelam Bhardwaj, Sr. Professor, Department of Obstetrics And Gynaecology, SMS medical College, Jaipur

Citation this Article: Dr. Prerna Sharma, Dr. Neelam Bhardwaj, Dr. Parveen, Dr. Prem Bajya, “A prospective study to evaluate & compare chromic catgut and vicryl rapide for episiotomy repair in the department of obstetrics & gynaecology, SMS Medical College, Jaipur”, IJMSIR- June - 2020, Vol – 5, Issue -3, P. No. 281– 290.

Type of Publication: Original Research Article

Conflicts of Interest: Nil

Abstract

Background: Episiotomy is the surgical enlargement of vaginal orifice during labour and delivery also known as perineotomy for facilitating easy delivery. It is the most common obstetric operation performed.

Methods: In our randomized comparative study of 222 women who were admitted to the Department of Obstetrics and Gynaecology, SMS Medical college Jaipur, the enrolled women were divided into 2 groups. In Group- A : Vicrylrapide (polygalactin-910) suture material was used in 111 patients and in Group-B chromic catgut suture material was used in another 111 patients, for repair of episiotomies.

Results: In vicryl rapide group out of 111 patients complete healing of episiotomies were found at 6 wks postpartum in 87.38% patients. In chromic catgut group out of 111 patients complete healing of episiotomies were found at 6 wks postpartum in 72.07% patients.

Conclusion: We concluded that vicryl rapide rather than chromic catgut used for episiotomy repair leads to

less perineal pain and better healing. In vicryl rapide group the incidence of wound dehiscence was markedly reduced and hence the need for resuturing. Dyspareunia was significantly less in vicryl rapide group. Wound healing was more secure with vicryl rapide.

Keywords: Chromic Catgut, Vicryl Rapid, Episiotomy

Introduction

Episiotomy is the surgical enlargement of vaginal orifice during labour and delivery also known as perineotomy for facilitating easy delivery. It is the most common obstetric operation performed. It is the surgically planned incision on the perineum and posterior vaginal wall during 2nd stage of labour. Ideal time is bulging thinned out perineum during contraction just prior to crowning.

The two most common types of episiotomies which are made are the midline or median and the mediolateral. The purpose of this procedure was to facilitate the completion of the second stage of labour to improve both the maternal and the neonatal outcomes. The

maternal benefits were thought to include a reduced risk of perineal trauma, subsequent pelvic floor dysfunction and prolapse, urinary incontinence, faecal incontinence, and sexual dysfunction. The potential benefits to the foetus were thought to include a shortened second stage of labour, which would result from a more rapid spontaneous delivery or from an instrumental vaginal delivery.

Though episiotomy is known to have maternal benefits, a substantial portion of both the short and long term postpartum morbidities is attributed to the perineal pain which is secondary to the episiotomy and the lacerations and their repair. The immediate consequences include blood loss, perineal pain, oedema, infection and hematoma and wound dehiscence. Others include an extension to 3rd or 4th degree lacerations. The long term complications include the formation of scar tissue, wound infections and dyspareunia. The factors which may influence the extent of any subsequent morbidity include the type of suture material which is used, the suturing technique and the skill of the operator. Debate flourishes among the practitioners about the appropriate material which should be used. The newer polyglycolic acid suture materials elicit less inflammatory tissue response than chromic catgut.¹ The use of synthetic materials in the perineal repairs reduce the postpartum pain and it also provides a better wound healing²

Material & Methods

Place of study:- Department of Obstetrics and Gynaecology, SMS Medical College, Jaipur.

Duration of study:- June 2018 to September 2019.

Type of study:- Randomised controlled study

Study Design:- Prospective study

Sample Size: Sample size of 111 women undergoing episiotomy repair in each group was required at 80% study power and α -error of 0.05 assuming primary wound healing in 84% patients of vicryl rapide A group and in 67% of chromic catgut B group as per results of seed article (Abhinayaa S, Jayanthi R, Nishanthini. A Prospective Randomized Comparative Study Of Episiotomy Repair : Vicryl Rapide Versus Chromic Catgut. IOSR Journal of Dental and Medical Sciences, e-ISSN : 2279-0853, p-ISSN : 2279-0861. Volume 16, Issue 10 Ver. VIII (Oct 2017), PP 72-79.).

Inclusion Criteria

All primigravida patients with an elective episiotomy.

Exclusion Criteria

- ❖ Episiotomy incision extended by instrumental delivery
- ❖ Severe anaemia
- ❖ Diabetes mellitus
- ❖ On drugs like steroids, immunosuppressant
- ❖ Epidural labor analgesia
- ❖ Severe preeclampsia

Methodology

- Women who fulfilled the above inclusion and exclusion criteria underwent an episiotomy suturing, either with vicryl rapide 2-0 (36 mm ½ circle double reverse cutting and round bodied needle) or chromic catgut 1-0 (30 mm, 1/2 circle round bodied needle).
- All the episiotomies were right mediolateral.
- The episiotomies were repaired by a standard three-step approach.
- Vaginal mucosa - continuous interlocking suture
- Perineal muscle - intermittent suture.
- The skin closure - mattress suture.

- Both the groups were assessed at 24-48 hrs, on days 3-5 and at 6 weeks postpartum.
- The outcome measures which were recorded were (1) 24 to 48 hours: Perineal pain, temperature, feeling of slight stitches swelling, retention of urine (2) Days 3 to 5: Pain, temperature, feeling of slight stitches, indurations, wound discharge, wound dehiscence (3) 6 weeks: Perineal pain, temperature, healing by primary, secondary and tertiary intentions, wound indurations, wound dehiscence

The following equipments were used in this study: -

- Swabs of Acraflavin solution
- Sterile perineal sheet (towel) for draping
- Rectified spirit
- Xylocaine (lignocaine) 1% 10 CC used as local anaesthesia
- Suture material
 - * Vicryl (polyglactin-910) No. 1-0 (on needle)
 - * Chromic catgut No. 1-0 (on needle)
- Sterile pads
- Needle holder
- Long straight scissor and long curved scissor
- Tooth dissecting forceps
- Sponge holder
- Bowl of Acraflavin solution swabs
- An instrument tray
- Two Kocher's forceps
- A cord cutting scissor
- Small curved artery forceps

Pre-delivery Preparations

Perineum and bowel preparation (Enema) was done, if amniotic membrane intact.

Procedure: Just after admission to labour room, detailed history and clinical examination was done and then shaving of perineum and bowel preparation (Enema) was done. After that p/v examination was done with all aseptic precautions.

In second stage of labour, patients were lying in lithotomy position and after painting and draping of perineum, wait for crowing of head was done. Just prior to crowing of head, local anaesthesia (1% Xylocaine) was injected and episiotomy was given by help of curved scissor. After delivery of baby, placenta and after achieving haemostasis, episiotomy wound was repaired. Episiotomy wound was repaired in three layers:

First Layer (Mucosal Layer) : In this layer suturing was started about 1 c m above the apex of mucosal incision and continuous suture applying to whole length of mucosa, except where episiotomy had extended high up in vagina, where interrupted sutures was used.

Second Layer (Muscular Layer) : The full depth of muscles was sutures by interrupted sutures, till there is no dead space and oozing of blood present.

Third Layer (Skin Layer) : It will be sutured by interrupted mattress suture or interrupted plain suture.

After completion of repair of episiotomy wound was observed for bleeding and haematoma formation, and then swabbing with spirit was done and a sterile pad was applied on wound and then both lower limbs are put on each others as Criss cross manner.

After 1-2 hours patients were shifted to maternity ward. In post operative treatment antibiotics, analgesics, antispasmodics and vitamins were given and perineal care was done.

Follow-up : After discharge from hospital on 2nd to 5th day, patient was asked to come in hospital for checking of episiotomy stitch line at 5th day if discharge earlier,

at 20th day and 90th day. We asked the patient about any complain and examine the stitch line of episiotomy, in the form of pain, tenderness, discomfort, swelling, infection, gaping, healing and suture material on the episiotomy wound. If suture was not absorbed or removed itself then we removed the suture material to prevent long term pain and scaring.

Statistical Analysis

The descriptive data was presented as number and percentages with mean and standard deviations, wherever required. The Chi square test was used for analysing the categorical data. The unpaired “t” test was used to compare the mean between the two groups. A p-value of <0.05 was considered to be statistically significant. The data collected were analysed with Medcalc 16.4 version software.

Observations & Discussion

Table 1: Distribution of Cases According to Age in Both Groups

Age Group (in yrs)	Group-A (Vicryl Rapide)		Group-B (Chromic Catgut)	
	No.	%	No.	%
18 - 20	20	18.01	22	19.82
21 - 25	67	60.36	66	59.45
26 - 30	17	15.32	15	13.53
31 - 35	7	6.31	8	7.20
>35	0	0.00	0	0.00
Total	111	100.00	111	100.00
Mean ± SD	2.37 ± 3.82		23.96 ± 3.48	

In present study in vicryl rapide group out of 111 patients age of patients were ranging from 18-35 yrs (Mean - 23.7 yrs) and in chromic catgut group out of 111 patients age of the patients were ranging from 18-35 yrs (Mean - 23.96 yrs).

In the study done by Bharathi A et al (2013)³ both the groups were comparable in terms of the age.

Table 2: Distribution of Cases According to Type of Episiotomy in Both Groups

Type of Episiotomy	Group-A (Vicryl Rapide)		Group-B (Chromic Catgut)	
	No.	%	No.	%
Right Medio-Lateral	111	100.00	111	100.00
Left Medio-Lateral	0	0.00	0	0.00
Median	0	0.00	0	0.00
Total	111	100.00	111	100.00

In our present study in vicryl rapide group out of 111 patients type of episiotomy was right medio-lateral in 100.00% patients. In chromic catgut group out of 111 patients type of episiotomy was right medio-lateral in 100.00% patients. Other type of episiotomies were not applied in both groups.

In the study done by Bharathi A et al (2013)³ both the groups were comparable in terms of type of episiotomy.

Table 3: Distribution of Cases According to Technique Used in Skin Repair in Both Groups

Technique Used in Skin Repair	Group-A (Vicryl Rapide)		Group-B (Chromic Catgut)	
	No.	%	No.	%
Interrupted Mattress Suture	111	100.00	111	100.00
Interrupted Simple Suture	0	0.00	0	0.00
Total	111	100.00	111	100.00

In our present study out of 111 patients in vicryl rapide group 100.00% deliveries were normal vaginal delivery. In chromic catgut group out of 111 patients 100.00% deliveries were normal vaginal delivery Other type of vaginal delivery not included in this study.

In chromic catgut group out of 111 patients skin repair of episiotomy was done by interrupted mattress suture technique in 100.00% patients and interrupted simple (plain) suture technique was not used in any patient.

In the study done by Bharathi A et al (2013)³ both the groups were comparable in terms of technique used in repair of episiotomy.

Table 4: Distribution of Cases According to Postpartum Hospital Stay in Both Groups

Hospital Stay (in days)	Group-A (Vicryl Rapide)		Group-B (Chromic Catgut)	
	No.	%	No.	%
1	0	0.00	0	0.00
2	43	38.80	35	31.60
3	54	48.60	51	45.90
4	6	5.40	13	11.70
5	4	3.60	8	7.20
>5	4	3.60	4	3.60
Total	111	100.00	111	100.00
Mean ± SD	2.86±0.98		3.06±1.15	

p-value = 0.356

In our present study in vicryl rapide group out of 111 patients postpartum hospital stay was ranging from 1-5 days (Mean - 2.86 days). In chromic catgut group out of 111 patients postpartum hospital stay was ranging from 1-5 days (Mean - 3.06 days).

Table 5: Distribution of Cases According to Pain in Repaired Episiotomies at Various Time Intervals

Time	Group-A (Vicryl Rapide)		Group-B (Chromic Catgut)		Chi-square	p-value
	No.	%	No.	%		
24 - 48 hrs	55	49.55	77	69.36	4.16	0.04
3 - 5 days	13	11.70	33	29.72	4.88	0.02
6 wks	4	3.60	6	5.40	0.21	0.64

In our present study in vicryl rapide group pain was present at 24-48 hrs in 49.55% patients, at 3-5 days in 11.70% patients, at 6 wks postpartum in 3.60% patients. In chromic catgut group pain was present at 24-48 hrs in 69.36% patients at 3-5 days in 29.72% patients and at 6 wks postpartum in 5.40% patients.

p-value related to pain was statistically significant at 24-48 hrs (p-value = 0.04), and at 3-5 days was also statistically significant (0.02). It shows pain was less in vicryl rapide group than in chromic catgut group at 24-48 hrs and at 3-5 days.

In a study conducted by Bharathi A et al (2013)³ the women in the vicryl rapide group had less perineal pain, as compared to those in the chromic catgut group, which was statistically significant.

In another study, Greenberg JA et al (2004)⁴ reported that there was a statistically significant reduction in the pain (25% vs 34%) in the fast absorbing polyglactin group at 24-48 hours. There were no significant differences between the two groups at 10-14 days. At 6-8 weeks, there was again a statistically significant reduction in the pain (1% vs 4%) and a statistically significant decrease in the analgesic use (5% vs 10%).

Mackrodt C et al (1998)⁵ observed a significantly fewer women allocated to the polyglactin 910 reported pain in the previous 24 hours at both 24 to 48 hours (59% vs 67%; RR 0.89, 95% CI 0.83-0.95; 2P < 0.01), and ten days (24% vs 29%; RR 0.81, 95% CI 0.69-0.95; 2P = 0.01).

Table 6: Distribution of Cases According to Redness in Repaired Episiotomies at Various Time Intervals

Time	Group-A (Vicryl Rapide)		Group-B (Chromic Catgut)		Chi-square	p-value
	No.	%	No.	%		
24 - 48 hrs	9	8.10	24	21.62	3.85	0.048
3 - 5 days	4	3.60	9	8.10	0.70	0.040
6 wks	0	0.00	0	0.00	0	0.00

In our present study in vicryl rapide group out of 111 patients redness was present at 24-48 hrs in 8.10% patients and at 3-5 days in 3.60% patients. In chromic catgut group out of 111 patients redness was present at 24-48 hrs in 21.62% patients and at 3-5 days in 8.10% patients. p-value related to redness was statistically significant at 24-48 hrs (0.048) and at 3-5 days (0.040). It shows redness was less in vicryl group than chromic catgut group at 24-48 hrs and at 3-5 days.

In a study done by Bharathi A et al (2013)³ a statistically significant reduction in the redness was observed on the 3rd -5th days (7% vs 13.5%).

Table 7: Distribution of Cases According to Swelling in Repaired Episiotomies at Various Time Intervals

Time	Group-A (Vicryl Rapide)		Group-B (Chromic Catgut)		Chi-square	p-value
	No.	%	No.	%		
24 - 48 hrs	4	3.60	8	7.20	0.70	0.40
3 - 5 days	0	0.00	9	8.10	4.16	0.04
6 wks	0	0.00	0	0.00	0	0.00

In our present study in vicryl rapide group out of 111 patients swelling was present at 24-48 hrs in 3.60% patients. In chromic catgut group out of 111 patients swelling was present at 24-48 hrs in 7.20% patients and at 3-5 days in 8.10% patients. p-value related to swelling statistically significant at 3-5 days. It shows swelling was not found in vicryl group than chromic catgut group at 3-5 days.

In a study done by Bharathi A et al (2013)³ a statistically significant reduction in the wound induration was observed on the 3rd-5th days (7% vs 13.5%).

An another study which was done by Shah PK et al (2001)⁶ reported that a wound swelling was seen in 6.5% cases in the vicryl rapide group and in 7.6% cases in the chromic catgut group in the first 24-48 hours and in 2.8% cases in the vicryl rapide group and in 3.4% cases in the chromic catgut group on the 5th day, which was statistically significant.

Table 8: Distribution of Cases According to Gaping in Repaired Episiotomies at Various Time Intervals

Time	Group-A (Vicryl Rapide)		Group-B (Chromic Catgut)		Chi-square	p-value
	No.	%	No.	%		
24 - 48 hrs	0	0.00	0	0.00	-	-
3 - 5 days	0	0.00	8	7.20	4.16	0.041
6 wks	0	0.00	2	1.80	1.01	0.31

In our present study in vicryl rapide group out of 111 patients gaping was not found in any patient. In chromic catgut group gaping was present at 3-5 days in 7.20% patients and at 6 wks postpartum in 1.80% patients. p-value related to gaping was statistically

significant (0.041) at 3-5 days. It shows gaping was more in chromic catgut group than vicryl group at 3-5 days postpartum.

In the study done by Bharathi A et al (2013)³ wound dehiscence/gaping was observed in 4% of the cases in the vicryl rapide group and in 13.5% cases in the chromic catgut group at 3-5 days, which was statistically significant. An another study which was done by Shah PK et al (2001)⁶ reported that wound gapes were seen more in the chromic catgut group than in the polyglactin group (8% vs 1.1%). One case in the chromic catgut group required resuturing.

Table 9: Distribution of Cases According to Analgesic Requirements in Repaired Episiotomies at Various Time Intervals

Time	Group-A (Vicryl Rapide)		Group-B (Chromic Catgut)		Chi-square	p-value
	No.	%	No.	%		
24 - 48 hrs	81	72.97	99	89.18	4.33	0.03
3 - 5 days	15	13.51	38	34.23	5.48	0.019
6 wks	0	0.00	0	0.00	-	-

In our present study in vicryl rapide group out of 111 patients analgesic was used by 72.97% patients at 24-48 hrs, at 3-5 days in 13.51% patients and at 6 wks postpartum in 0.00% patients. In chromic catgut group analgesic was used by patients at 24-48 hrs in 89.18% patients, at 3-5 days in 34.23% patients and at 6 wks postpartum in 0.00% patients. p-value related to analgesic used was statistically significant at 24-48 hrs(0.03) and at 3-5 days(0.019). It shows analgesic were more used by patients in chromic catgut group than vicryl group.

In the study which was done by Shah PK et al (2001)⁶. On day 5 and day 20, there was less pain and analgesics were required in the polyglactin 910 group than in the chromic catgut group [(19.5% vs 24.6%), (5.6 vs 16%) and (68.5% vs 61%), (3.3 vs 18%)] respectively.

Table 10: Distribution of Cases According to Temperature in Repaired Episiotomies at Various Time Intervals

Time	Group-A (Vicryl Rapide)		Group-B (Chromic Catgut)		Chi-square	p-value
	No.	%	No.	%		
24 - 48 hrs	4	3.60	8	7.20	0.7	0.4
3 - 5 days	0	0.00	9	8.10	4.16	0.04
6 wks	0	0.00	0	0.00	-	-

In our present study in vicryl rapide group temperature was raised at 24-48 hrs in 3.60% of patients. In chromic catgut group temperature was raised at 24-48 hrs in 7.20% of patients and at 3-5 days in 8.10% patients. p-value related to rise in temperature is statistically significant at 3-5 days. It shows temperature rise seen more in chromic catgut group than vicryl group.

In the study done by Bharathi A et al (2013)³ puerperal fever was seen in 2.5% of the cases in the vicryl rapide group and in 3.5% of the cases in the chromic catgut group.

Table 11: Distribution of Cases According to Dyspareunia in Repaired Episiotomies at Various Time Intervals

Time	Group-A (Vicryl Rapide)		Group-B (Chromic Catgut)		Chi-square	p-value
	No.	%	No.	%		
24 - 48 hrs	0	0.00	0	0.00	-	-
3 - 5 days	0	0.00	0	0.00	-	-
6 wks	3	2.70	17	15.31	5.98	0.014

In our present study in vicryl rapide group dyspareunia at 6 wks postpartum seen in 2.70% patients. In chromic catgut group dyspareunia in repaired episiotomies at 6 wks postpartum is seen in 15.31% patients. p-value related to dyspareunia in repaired episiotomies is statistically significant(0.014). It shows that dyspareunia was less in vicryl group than in chromic catgut group at 6 wks postpartum.

In a study done by Ketcham KR et al (1994)⁷ observed that the recovery of function, measured by resumption

of sexual activity by 6 weeks, was demonstrated in 1 of 42 patients who had chromic sutures versus 19 of 37 patients who had polyglycolic acid sutures.

In another study done by Upton A et al (2002)⁸ says that although there were no statistically significant differences, parity-adjusted odds ratios (aOR) suggest that compared with women sutured with catgut, women sutured with polyglycolic were less likely to experience perineal pain at Day 3 postpartum (aOR=0.70 95% confidence interval [95% CI] 0.46-1.08) but by six months postpartum were somewhat more likely to experience perineal pain (aOR=1.77, 95% CI 0.57-5.47), dyspareunia (aOR=1.21 [0.62-2.33] and require removal of a suture (aOR=2.61 95% CI 0.59-12.41).

Table 12: Distribution of Cases According to Follow-up and Examination of Repaired Episiotomy at 24-48 Hours in Both Groups

Complication	Group-A (Vicryl Rapide)		Group-B (Chromic Catgut)	
	No.	%	No.	%
Pain	55	49.55	77	69.36
Redness	9	8.10	24	21.62
Swelling	4	3.60	8	7.20
Gaping	0	0.00	0	0.00
Analgesic	81	72.97	99	89.18

In our present study in vicryl rapide group at 24-48 hrs pain was present in 49.55% of patients, redness was found in 8.10% of patients, swelling was found in 3.60% patients and analgesic used by 72.97% of patients.

In chromic group at 24-48 hrs pain was present in 69.36% of patients, redness was found in 21.62%, swelling was found in 7.20% and analgesic was used by 89.18% of patients.

Table 13: Distribution of Cases According to Follow-up and Examination of Repaired Episiotomy at 3-5 Days in Both Groups

Complication	Group-A (Vicryl Rapide)		Group-B (Chromic Catgut)	
	No.	%	No.	%
Pain	13	11.70	33	29.72
Redness	4	3.60	9	8.10
Swelling	0	0.00	9	8.10
Gaping	0	0.00	8	7.20
Analgesic	15	13.51	38	34.23

In our present study in vicryl rapide group at 3-5 days pain was present in 11.70% of patients, redness was found in 3.60% of patients and analgesic was used by 13.51% of patients, none of the patients shows swelling and gaping.

In chromic group at 3-5 days pain was present in 29.72% of patients, redness was found in 7.20% of patients, swelling was found in 8.10% of patients, gaping was found in 1.80% of patients and analgesic was used by 34.23% of patients.

Table 14: Distribution of Cases According to Follow-up and Examination of Repaired Episiotomy at 6 Weeks Postpartum in Both Groups

Complication	Group-A (Vicryl Rapide)		Group-B (Chromic Catgut)	
	No.	%	No.	%
Pain	4	3.60	6	5.40
Gaping	0	0.00	2	1.80
Healing	97	87.38	80	72.07
Wound Discharge	4	3.60	8	7.20
Dyspareunia	3	2.70	17	15.31

In our present study in vicryl rapide group at 6 wks postpartum pain was present in 3.60% of patients, healing was present in 87.38% of patients, dyspareunia was present in 2.70% of patients and wound discharge was present in 3.60% of patients.

In chromic catgut group pain was present at 6 wks postpartum in 5.40% of patients, gaping was present in 7.20% of patients, healing was present in 72.07% of patients, wound discharge was present in 7.20% of patients and dyspareunia was present in 15.31% of patients.

Table 15: Distribution of Cases According to Healing in Repaired Episiotomies at Various Time Intervals

Time	Group-A (Vicryl Rapide)		Group-B (Chromic Catgut)		Chi-square	p-value
	No.	%	No.	%		
24 - 48 hrs	0	0.00	0	0.00	-	-
3 - 5 days	0	0.00	0	0.00	-	-
6 wks	97	87.38	80	72.07	3.99	0.048

In our present study in vicryl rapide group out of 111 patients complete healing of episiotomies were found at 6 wks postpartum in 87.38% patients. In chromic catgut group out of 111 patients complete healing of episiotomies were found at 6 wks postpartum in 72.07% patients.

p-value related to healing was statistically significant at 6 wks postpartum. It shows healing was more in vicryl group than chromic catgut group at 6 wks postpartum.

In the study done by Bharathi A et al (2013)⁵⁵ our, a primary intention of the wound healing was observed in 82% of the cases in the vicryl rapide group and in 71% cases in the chromic catgut group. A wound healing by secondary intention was observed in 3.5% cases in the vicryl rapide group and in 8% cases in the chromic catgut group. A tertiary type of healing was seen in 2% cases in the chromic catgut group and in none of the cases in the vicryl rapide group. The results were statistically significant and were comparable to various international studies.

In another study done by Ketchem KR et al (1994)⁴⁸ observed that at the 6-week postpartum examination, patients with polyglycolic acid sutures had significantly better healing than patients with chromic catgut sutures.

In a study conducted by Abhinayaa S et al (2017)⁶³ wound healing by primary intention was observed in 84% of cases in VR group and 67% in CC group. Wound healing by secondary intention was observed in

3% in VR group and 8% in CC group. Tertiary type was seen in 2% in CC group and none in VR group. Chi-square test value is 8.964, $p < 0.05$, which is statistically significant. 13% of cases were lost in follow up in VR group and 23% cases were lost in CC group follow up.

Table 16: Distribution of Cases According to Wound Discharge in Repaired Episiotomies at Various Time Intervals

Time	Group-A (Vicryl Rapide)		Group-B (Chromic Catgut)		Chi-square	p-value
	No.	%	No.	%		
24 - 48 hrs	0	0.00	0	0.00	-	-
3 - 5 days	0	0.00	0	0.00	-	-
6 wks	4	3.60	8	7.20	0.70	0.40

In our present study in vicryl rapide group out of 111 patients wound discharge in repaired episiotomies at 6 wks postpartum is seen in 3.60% patients. In chromic catgut group out of 111 patients wound discharge in repaired episiotomies at 6 wks postpartum seen in 7.20% patients.

p-value related to wound discharge in repaired episiotomies is statistically insignificant. It shows there is no significant difference in two groups regarding wound discharge in repaired episiotomies 6 wks postpartum.

In one study done by Leurox N et al (2006)⁵¹ reported that there was no wound infection and discharge at the site of the perineum repair in both the groups.

In a study conducted by Abhinayaa S et al (2017)⁶³ it can be observed that wound discharge was present in 2% of cases in VR group and 15% of cases in CC group. Chi-square test value is 10.86, $p < 0.05$, which is statistically significant. In a study done by Upton A et al (2002)⁷³ it was reported one woman in each group had an infection at the repair site.

Conclusion

From this study it can be concluded that vicryl rapide rather than chromic catgut used for episiotomy repair leads to less perineal pain and better healing. In vicryl rapide group the incidence of wound dehiscence was markedly reduced and hence the need for resuturing. Dyspareunia was significantly less in vicryl rapide group. Wound healing was more secure with vicryl rapide.

Present study indicates clear advantages of vicryl rapide over chromic catgut as far as subjective pain perception, wound healing, wound dehiscence are concerned. Hence this study recommends use of vicryl rapide for episiotomy repair in the care of parturient women.

References

1. Sultan AH, Monga AK, Stanton SL. The pelvic floor sequelae of childbirth. British Journal of Hospital Medicine. 1996; 55(9) : 575–579.
2. Sultan AH. Obstetric perineal injury and anal incontinence. Clinical Risk. 1999; 5 : 193–6.
3. Bharathi A, Reddy DB, Kote GS. A prospective randomized comparative study of vicryl rapide versus chromic catgut for episiotomy repair. J Clin Diagn Res. 2013 Feb; 7(2) : 326-30. doi: 10.7860/JCDR/2013/5185.2758.
4. Greenberg JA, Lieberman E, Cohen AP, Ecker JL. Randomized comparison of chromic versus fast-absorbing polyglactin 910 for postpartum perineal repair. Obstet Gynecol. 2004 Jun; 103(6) : 1308-13.
5. Mackrodt C, Gordon B, Fern E, Ayers S, Truesdale A, Grant A. The Ipswich Childbirth Study: 2. A randomised comparison of polyglactin 910 with chromic catgut for postpartum perineal repair. Br J Obstet Gynaecol. 1998 Apr; 105(4) : 441-5.

6. Shah PK, Nickalse P, Gourewar V, Dholakia S. A randomized comparative study of polyglactin-910 vs chromic catgut for postpartum episiotomy repair : A pilot study. *Obstet Gynaec.* 2001; 6(8) : 465-68.
7. Ketcham KR, Pastorek JG 2nd, Letellier RL. Episiotomy repair: chromic versus polyglycolic acid suture. *South Med J.* 1994 Apr; 87(4) : 514-7.
8. Upton A, Roberts CL, Ryan M, Faulkner M, Reynolds M, Raynes-Greenow C. A randomised trial, conducted by midwives, of perineal repairs comparing a polyglycolic suture material and chromic catgut. *Midwifery.* 2002 Sep; 18(3) : 223-9.