

COMPARISON BETWEEN CHROMIC CATGUT AND VICRYL RAPIDE FOR ANALGESIA REQUIREMENT IN EPISIOTOMY REPAIR IN PRIMIGRAVIDAS

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Abstract

Introduction: Episiotomy is an incision through the perineum made to enlarge the diameter of the vulvae outlet and assist childbirth. As it is noted that long-term complications after episiotomy repair are common so that I used vicryl which is polyglactin and it causes less tissue reaction and is absorbed by hydrolysis in comparison of vicryl in comparison of vicryl rapide chromic catgut is manufactured from collagen and causes an inflammatory response into the tissues as it is broken down by proteolytic enzymes and phagocytosis. There is controversy in results which is better suture material. That is why we designed this study

to compare vicryl rapide and chromic catgut.

Objectives: The objective of my study is to compare the frequency of analgesia requirement in primigravida undergoing episiotomy repair with Chromic Catgut versus Vicryl Rapide.

Methodology: This study was conducted at the Department of Obstetrics And Gynaecology, Unit-II, Services Institute of Medical Sciences / Services Hospital Lahore for duration of 6 months after approval of synopsis. Total 100 cases were included in the study through Non probability, consecutive sampling from labour room 2 of department of obstetrics & gynaecology, SIMS Lahore. After taking informed consent and demographic details, patients were divided randomly in two equal groups through lottery method. In group A, episiotomy was stitched with Vicryl rapide and in group B the episiotomy was stitched with chromic catgut by researcher herself. Requirement of analgesia was noted (as per operational definition). All this procedure was noted on a pre-designed proforma (attached). Data was analyzed using SPSS version 17. Mean \pm SD was calculated for age and gestational age. Frequency and percentage was calculated for analgesia requirement. Chi-Square test was applied to compare frequency of analgesia requirement. P value <0.05 was considered as significant.

Results: Total 100 patients presented in this study. Out of 100 patients the mean age of vicryl rapide group was noted as 24.72 ± 2.33 years, similarly the mean

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age of Chromic Catgut group was noted as 24.76 ± 2.60 years. The mean gestational age of the patients were noted as 38.07 ± 1.31 weeks. The mean gestational age of vicryl rapide group was noted as 37.96 ± 1.36 weeks and the mean gestational age of Chromic Catgut group was noted as 38.19 ± 1.27 weeks. Out of 100 patients 50 (50%) required analgesic treatment. Out of 50 patients only 1 (2%) patient required analgesic treatment on day 7 from Vicryl rapide group and 49 (98%) appeared from chromic catgut group, while out of 50 patients who do not require this treatment 49 (98%) appeared from vicryl rapide group and 1 (2%) appeared from chromic catgut group. Statistically there is highly significant difference between the study groups i.e. p-value = 0.000*.

Conclusion: This study concluded that vicryl rapide was the ideal suture material for episiotomy repair, which resulted in less pain and a better wound healing.

Key Words: Episiotomy, Vicryl Rapide, Chromic Catgut, infection, pain, analgesia.

Introduction

Episiotomy is an incision through the perineum made to enlarge the diameter of the vulvae outlet and assist childbirth. There is no significant association of episiotomy in pelvic floor function test for example digital and vaginal manometer as compared to women with intact perineal and first and second degree lacerations.¹

Long-term complications are more common with episiotomy repair. About 80% of women suffer perineal pain for short time but long term problems such as dyspareunia is in about 20% of the patients.⁽²⁾ Removal of suture material extensive dehiscence and need for resuturing are other complications.⁽³⁾ Incidence of repair and stitching of episiotomy in about 70%. Despite the high incidence of such repair, there is no monitoring process of either the repair procedure or subsequent healing. Both short term and long term complication after child birth may have an effect on the amount of pain and dyspareunia.²

Vicryl which is polyglactin and it causes less tissue reaction and is absorbed by hydrolysis in comparison of vicryl in comparison of vicryl rapide chromic catgut is manufactured from collagen and causes an inflammatory response into the tissues as it is broken down by proteolytic enzymes and phagocytosis. Vicryl rapide for perineal repair following child birth appear

to decrease women experience of short term pain after delivery.^{1,3}

Results

Out of 100 patients the mean age of vicryl rapide group was noted as 24.72 ± 2.33 years with minimum and maximum age of 20 and 30 years respectively, similarly the mean age of Chromic Catgut group was noted as 24.76 ± 2.60 years with minimum and maximum age of 21 and 30 years respectively (Table 1).

Table 1: Descriptive statistics of Age (years) of patients in accordance with study groups.

		Study Group	
		Vicryl Rapide	Chromic Catgut
Age (Years)	n	50	50
	Mean	24.72	24.76
	SD	2.33	2.60
	Minimum	20	21
	Maximum	30	30

The mean gestational age of the patients were noted as 38.07 ± 1.31 weeks with minimum and maximum gestational ages of 36 and 41.30 weeks respectively (Table 2).

Table 2: Descriptive statistics of Gestational Age (Weeks) of the patients.

Gestational Age (Weeks)	n	100
	Mean	38.07
	SD	1.31
	Minimum	36.00
	Maximum	41.30

Out of 100 patients the mean gestational age of vicryl rapide group was noted as 37.96 ± 1.36 weeks with minimum and maximum values of 36 and 41.30 weeks respectively, similarly the mean gestational age of Chromic Catgut group was noted as 38.19 ± 1.27

weeks with minimum and maximum values of 36 and 40.50 weeks respectively (Table 3).

Out of 100 patients 50 (50%) required analgesic treatment on day 07 and 50 (50%) not required this treatment on day 07 (Fig. 1).

Table 3: Descriptive statistics of Gestational Age (weeks) of patients in accordance with study groups.

		Study Group	
		Vicryl Rapide	Chromic Catgut
Gestational Age (Weeks)	N	50	50
	Mean	37.96	38.19
	SD	1.36	1.27
	Minimum	36	36
	Maximum	41.30	40.50

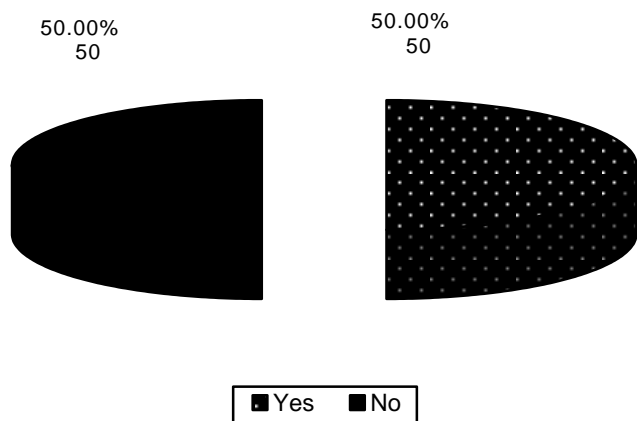


Fig. 1: Description about Analgesic required on 7 day of patients.

Table 4: Comparison of Analgesic requirement in accordance with study groups.

		Study Group		Total
		Vicryl Rapide	Chromic Catgut	
Analgesic required on day 7	Yes	1 (2%)	49 (98%)	50 (50%)
	No	49 (98%)	1 (2%)	50 (50%)
Total		50 (50%)	50 (50%)	100 (100%)

Chi-square = 88.36 p-value = 0.000 (Significant)

Out of 50 patients only 1 (2%) patient required analgesic treatment on day 7 from Vicryl rapide group and 49 (98%) appeared from chromic catgut group, while out of 50 patients who do not require this treatment 49 (98%) appeared from vicryl rapide group and 1 (2%) appeared from chromic catgut group. Statistically there is highly significant difference between the study groups i.e. p-value = 0.000* (Table 4).

Discussion

In united states about 40% of women under go episiotomy but its incidence is markedly reduce now a days. For example, 1.6 million episiotomies were performed in 1992 and only 716,000 in 2003. In some countries the incidence of episiotomy is lower than US. When we compared our results with that of the other studies, the following observations are made.

Bharathi A et al., conducted a study on comparison of vicryl rapid and chromic catgut group and concluded in my study there were two groups and I experienced as compared to chromic catgut vicryl rapide group had less pain (32.5% vs. 57%) and a less need for analgesia (15.5% vs. 0.5) at 3 – 5 days. And it was also observed that there was significant reduction in the wound indurations, uncomfortable stitches and wound dehiscence (4% vs. 13.5%) and a better wound healing (p < 0.05 significant). There was no significant difference was noted in the perineal pain at 6 weeks postpartum in both groups. I observed that 3.5% of patient experienced infection and 2.0% under wound resuturing in chromic catgut groups.⁴

Esa Bose and his colleagues also concluded that vicryl rapide is better affected in reducing pain as compared to chromic catgut. The result of my study showed that vicryl rapide produce less pain among patients following episiotomy wound repair in walking, sitting and lying position at 24 hrs 48 hrs and six weeks postpartum and also after perineal repair.⁵

The study conducted by Joseph *et al.* reported that women in vicryl rapide group experienced less pain as compared to chromic catgut group. But the results were statistically insignificant (P > 0.05).⁶

In another study conducted by Mackrodt *et al.*, showed that 523 out of 886 (59.02%) women of vicryl rapide group and 591 out of 888 (66.55%) in catgut group.⁷

Kurian Joseph et al correlate their findings by showing polyglactin 910 rapide (PR) to be the better suture material compared to polyglactin 910 (PG) and

chromic catgut (CC) in terms of short and long term pain relief in walking and sitting postures and in wound healing.⁸

Mackrodt et al, study revealed that PG was better than CC in terms of short term pain relief, but there was no difference in long term pain relief, analgesic requirement and wound healing. In PG group 12% needed suture removal due to residual suture material and tight sutures.⁹

Cochrane database meta-analysis review by Kettle et al, involving eight trials showed considerable variation.¹⁰ In the gauge of suture material, the size of needle, suturing technique, duration of follow-up and outcomes assessed. Women experiencing short term pain were less in the PR and PG groups than in the catgut group. More women in the CC group had wound dehiscence and required resuturing than those in PG and PR groups. At 3 months after delivery, there was no significant difference in dyspareunia and in the amount of pain between the three groups. Removal of suture material was more common in PG and PR groups than in CC group.

While our study results totally associated with the international articles as discussed above, our study results also showed that Vicryl rapide is better than the chromic catgut. Out of 50 patients only 1 (2%) patient required analgesic from Vicryl rapide group and 49 (98%) appeared from chromic catgut group, whereas the patients who do not require this pain relief analgesia, 49 (98%) appeared from vicryl rapide group and 1 (2%) appeared from chromic catgut group. Statistically there is highly significant difference between the study groups i.e. p-value = 0.000.

Conclusion

The requirement of analgesia in vicryl rapide group was significantly lower than chromic catgut group. The controversy in results mentioned in literature has been resolved now. And thus it has been proved that vicryl rapide is more advantageous as compared to

chromic catgut. Thus it was concluded that vicryl rapide was the ideal suture material for episiotomy repair, which resulted in less pain and a better wound healing.

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