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Rate of Perineal Injuries and Episiotomy in a Sample of Women at Maternity Teaching Hospital in Erbil City

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Abstract
Background and Objectives: episiotomy is a surgical incision done during the last stages of labor and delivery to expand the opening of the vagina to prevent tear-ing of the perineum during the delivery of the baby. The objectives of this study are to estimate episiotomy and perineal injury rate, indication for episiotomy and their association with socio-demographic characteristics.
Patients and Methods: Cross-sectional study was conducted between 1st.april.2015-1st.oct.2015 at maternity Teaching Hospital in Erbil city; convenient sampling was used to select the study sample (all 500 pregnant women admitted for normal vaginal delivery during period of study). Information about episiotomy, post-nataly immediately after birth of child in labor room and socio-demographic characteristics were obtained from patients and midwifes.**Results:** The results revealed that the episiotomy rate was 44.2%, perineal injury rate 18.4%, perineal rigidity is first indication for episiotomy which represented 65.6% of cases followed by maternal exhaustion 12.2%. Significant association seen between episiotomy, perineal injury rate with several parameters under study, rather than there was also significant association was seen between episiotomy and perineal injury rate.**Conclusion:** Episiotomy and perineal injury rate was considered acceptable rate even it is higher than what was reported in developed countries as well as the result revealed that episiotomy was minimizing the rate of perineal injury.

Introduction

Episiotomy was introduced as an obstetric procedure more than 200 years ago. However, it became a common practice only from the beginning of 20th century. It was thought that all primi-gravida should receive an episiotomy to protect fetal head and the pelvic floor [(1).] Wide variations in episiotomy practice are reported internationally, ranging from routine use in all births to use only when clinically indicated[(2)]. It is more prevalent in America and Canada than in Europe, because European mothers chose side position during childbirth that provides the gradual stretching of perineum and lower incidence of episiotomy[(3)]. Restrictive episiotomy is associated with less posterior perineal trauma, less suturing, fewer complications, but is associated with an increased risk of anterior perineal trauma. [(4)]. currently there is no scientific evidence is available to support the use of routine episiotomy to prevent intracranial hemorrhage in preterm deliveries [(5)]. A systematic review of randomized controlled trials shows that policies of restrictive episiotomy have benefits compared to routine episiotomy, including less posterior perineal trauma, less suturing and fewer healing complications[(2)]. World Health Organization has recommended that episiotomy practice should be limited to strict indications[(6)]. Episiotomy is associated with increased blood loss at the time of delivery, hematoma formation, infection, and rarely abscess and recto-vaginal fistula formation [(2, 7)]. The midline episiotomy is associated with a higher rate of damage to the anal sphincter and rectum when compared to the Medio-lateral episiotomy. The long held belief that postoperative pain is less and healing improved with episiotomy compared with perineal tear appears not to be true [(8)]. Perineal trauma during childbirth is associated with substantial short- and long-term morbidity like urinary and fecal incontinence, dyspareunia, high blood loss and persistent pain after perineal trauma require continuous and cost-effective surgical, conservative and psychological treatment for these women [(9)].Primiparity, instrumental delivery (forceps in special), high birth weight, III–IV degree tears and episiotomy are known risk factors for perineal trauma [(2, 10)].Several techniques (for example perineal massage, whirlpool bath, perineal lubrication, perineal injection of hyaluronidase, etc.) have been proposed to prevent episiotomy or other kinds of perineal trauma [(2,11,)].Some risk factors for more severe perineal trauma for example, ethnicity, parity and infant birth weight may not be amenable to intervention [(12)].The incidence of episiotomy ranges from 20% to 62.5% worldwide [(13)].Reported rates of episiotomies vary from as low as 9.7% in Sweden to as high as 100% in Taiwan [(14)]. The rate of episiotomies was reported to be 71% in Germany and 49% in Nigeria [(15)]. Unfortunately, no information is available about the rate of episiotomy in Kurdistan region [(16)]. this study aims to find out the rate of episiotomy and perineal injury, indications for episiotomy and association of episiotomy and perineal tear to socio-demographic characters.

Patients and Methods

After approval from concerned authorities was obtained, a cross-sectional study was conducted between

1st.april.2015-1st.oct.2015 at maternity Teaching Hospital in Erbil city, five hundred pregnant women who were admitted for normal vaginal delivery were enrolled in this study. Questionnaire was developed by research team covered the following items; socio-demographic data, past obstetrical history, current obstetric notes, chronic co-morbid illness, indication for episiotomy, cause of perineal injury if any and others. The data were collected via interview with the obstetricians and the patients in labour room, patients name was kept anonymous. SPSS version 20 used for data entry and analysis. Chi-Square test and Fisher's Exact Probability test applied to test association between dependent and independent variables. P value ≤ 0.05 was considered significant.

Results

Out of 500 participant early postnatal women in labor room were the mean age from age group 20-35 years was (84.6%) of them, (67.6%) of them with primary and secondary level of education, (91.4%) were housewife, as well as the highest percentage (64.9%) of them with medium level of socioeconomic state, as seen in table.1

Table.1 distribution of sample according to socio-demographic characteristics.

		Count	Column N %
Age category	<20	57	11.4%
	20-35	423	84.6%
	>35	20	4.0%
educational level	Illiterate	97	19.4%
	primary school	241	48.2%
	secondary school	97	19.4%
	College and higher	65	13.0%
Occupation	House wife	457	91.4%
	Student	18	3.6%
	Governmental employee	23	4.6%
	Self-employee	2	0.4%
Socioeconomic class	<5(low)	165	33.1%
	5-10(medium)	324	64.9%
	>10(high)	10	2.0%

Of 500 women (23.4%) was Primigravida, and (76.6%) was Multigravida, the highest percentage (48.6%) were had parity of 2-3, (62.1%) had past episiotomy, (8.4%) with history of perineal tear, (6.5%) with history of cesarean section. The current episiotomy rate was 44.2% and rate of perineal injury was 18.4%.Instrumental delivery rate was 0.6% only and just 3.4% of them had co-morbid illness such as diabetes mellitus or hypertension as seen in Table.2.

Table.2 distribution of study sample according to the past and current obstetrical history.

		Count	Column N %
Parity	1	139	27.8%
	2-3	243	48.6%
	≥ 4	118	23.6%
Past Episiotomy	Yes	238	62.1%
	No	145	37.9%
Past perineal tear	Yes	32	8.4%
	No	351	91.6%
Past cesarean section	Yes	25	6.5%
	No	358	93.5%
Current Episiotomy	Yes	221	44.2%
	No	279	55.8%
Current Perineal injury	Yes	92	18.4%
	No	408	81.6%
Instrumental Delivery	Yes	3	0.6%
	No	497	99.4%
Co-morbid Illnesses	Yes	17	3.4%
	No	483	96.6%

Regarding the cause of episiotomy out of 221 women when undergo episiotomy (65.6%) of them due to rigid perineum and (12.2%) due to maternal exhaustion and small percentage due use of episiotomy as a routine procedure for normal vaginal delivery, good size baby, pervious history of perineal injury in (8.6%), (5.9%), (5.4%) respectively as listed in Table 3

Table 3 Indications for current episiotomy

	Frequency	Percent
Perineal rigid	145	65.6
Maternal exhaustion	27	12.2
Routine procedure for normal vaginal delivery	19	8.6
Good size baby	13	5.9
Previous history of perineal injury	12	5.4
Vaginal breach	3	1.4
Face to pubis	2	0.9
Total	221	100.0

The current study showed significant association between episiotomy rate and age, education status, and occupation) of participant women ($p<0.05$), while there was no significant association reported in previous criteria with perineal injury rate. as seen in Table.4.

Table.4- relationship of current episiotomy, current perineal injury to demographic characteristics and variables related to pregnancy

		current episiotomy				p-value	current perineal injury				p-value
		Yes		No			Yes		No		
		Count	Row N %	Count	Row N %		Count	Row N %	Count	Row N %	
Age category	<20	14	24.6%	43	75.4%	0.001	9	15.8%	48	84.2%	0.6
	20-35	193	45.6%	230	54.4%		78	18.4%	345	81.6%	
	>35	14	70.0%	6	30.0%		5	25.0%	15	75.0%	
Educational level	Illiterate	27	27.8%	70	72.2%	0.002	12	12.4%	85	87.6%	0.1
	primary school	87	36.1%	154	63.9%		53	22.0%	188	78.0%	
	secondary school	57	58.8%	40	41.2%		15	15.5%	82	84.5%	
	College and higher	50	76.9%	15	23.1%		12	18.5%	53	81.5%	
occupation	House wife	189	41.4%	268	58.6%	0.001	81	17.7%	376	82.3%	0.2
	Student	17	94.4%	1	5.6%		3	16.7%	15	83.3%	
	Governmental employee	15	65.2%	8	34.8%		7	30.4%	16	69.6%	
	Self-employee	0	0.0%	2	100.0%		1	50.0%	1	50.0%	
Socioeconomic class	<5	67	40.6%	98	59.4%	0.3	40	24.2%	125	75.8%	0.06
	5-10	147	45.4%	177	54.6%		50	15.4%	274	84.6%	
	>10	6	60.0%	4	40.0%		1	10.0%	9	90.0%	

The present study showed there was a significant association ($p=0.001$) between the rate of episiotomy (parity, past episiotomy, past cesarean section and co-morbid illness) ($p<0.05$). While there was no significant association was reported with (past perineal tear and instrumental delivery) ($p>0.05$). On analyses the association between perineal injury and different parameters, the results showed there was a significant association ($p<0.05$) between perineal injury and each of (parity statues, past episiotomy, past cesarean section and co-morbid illness) as seen in Table.5

Table.5- relationship of current episiotomy, current perineal injury to variables related to pregnancy

		current episiotomy				p-value	current perineal injury				p-value
		Yes		No			Yes		No		
		Count	Row N %	Count	Row N %		Count	Row N %	Count	Row N %	
Parity	1	119	85.6%	20	14.4%	0.001	23	16.5%	116	83.5%	0.03
	2-3	95	39.1%	148	60.9%		55	22.6%	188	77.4%	
	≥ 4	7	5.9%	111	94.1%		14	11.9%	104	88.1%	
Past. Episiotomy	Yes	94	39.5%	144	60.5%	0.001	58	24.4%	180	75.6%	0.004
	No	19	13.1%	126	86.9%		17	11.7%	128	88.3%	
Past perineal tear	Yes	8	25.0%	24	75.0%	0.5	10	31.2%	22	68.8%	0.08
	No	105	29.9%	246	70.1%		65	18.5%	286	81.5%	
Past Ceserian section	Yes	17	68.0%	8	32.0%	0.001	0	0.0%	25	100.0%	0.01
	No	96	26.8%	262	73.2%		75	20.9%	283	79.1%	
Instrumental delivery	Yes	3	100.0%	0	0.0%	0.5	0	0.0%	3	100.0%	0.4
	No	218	43.9%	279	56.1%		92	18.5%	405	81.5%	
Comorbid Illnesses	Yes	2	11.8%	15	88.2%	0.006	7	41.2%	10	58.8%	0.01
	No	219	45.3%	264	54.7%		85	17.6%	398	82.4%	

The present study demonstrated a significant association between current episiotomy rate and current perineal injury rate, where the finding showed that just 19(8.6%) of pregnant women who were episiotomy done for them presented with perineal tear in comparison to 73(26.2%) who were not undergone episiotomy as seen in table.6.

Table.6-relathionship of current episiotomy and current perineal injury

			current perineal injury		Total	p-value
			Yes	No		
Current Episiotomy	Yes	Count	19	202	221	0.01
		% within current episiotomy	8.6%	91.4%	100.0%	
	No	Count	73	206	279	
		% within current episiotomy	26.2%	73.8%	100.0%	
Total		Count	92	408	500	
		% within current episiotomy	18.4%	81.6%	100.0%	

Discussion

Use of episiotomy as standard in the vaginal deliveries is changing, and the rate at the end of this demonstrates favorable downward trend [(17)]. Consensus is still being arrived at on what should be the acceptable and reasonable episiotomy rate and what are the specific maternal and fetal indications for episiotomy. However, there is evidence that episiotomy rate of more than 30% is not acceptable and episiotomy should be done on selective basis than done as a routine [(18)]. A study was carried out in Spain [(19)], that suggest use of episiotomy in not more than 30% of vaginal deliveries and they reported; higher level of health care institution higher rate of episiotomy had been found. A systematic review on episiotomy for vaginal birth concludes that restrictive episiotomy policies appear to have a number of benefits than routine episiotomy policies[(20)],that associated with reduced anal sphincter laceration rate by 50 %[(21)].In this study, out of 500 mothers who had vaginal delivery 44.2% undergone episiotomy and this rate was lower than that reported in study that done in India which revealed that episiotomy rate was 67% . A study done in Jordon has found an episiotomy rate of 39 %. In Lagos, Nigeria episiotomy rate is 54.9% and in Brazil it is94.2 %[(1)]. In European countries had been found the rate of episiotomy was 75% in Cyprus and 70% in Poland, Portugal and Romania. Rate was varied between 43–58% in Flanders, the Czech Republic and Spain at the same time the rate was varied between 16% -36% in studies that done in England, Wales, Scotland, Finland, France, Germany and Switzerland[(22)].New Zealand and Australia have national rates that are comparable to the moderately low European countries, with New Zealand reporting episiotomy rates of 12.5% in 2010 and Australia 16.3 % (this included episiotomy and laceration)[(23,24)]. The finding of present study showed that the rate of perineal tear decreased when the episiotomy was done and this finding inconsistent with the result of study done in Scotland and England. [(25)] Who was reported that the using of episiotomy increased the risk of extensive perineal tears without a reduction in the risk of shoulder dystocia. This study showed that the risk factors for perineal injury and consequent problems are nulli parity, episiotomy (midline episiotomy in particular), higher age of the mother, vaginal operative deliveries and high birth weight are consistent with finding of study done in USA [(26).)] which reported that the routine use of episiotomy avoids perineal injury during delivery. Many reports over the last 20 years verify an increase in the likelihood of perineal trauma. Therefore, the restrictive use of an episiotomy was postulated and is reflected in declining rates

of episiotomy over the last 15 years. further studies should determine how to choose a candidate for episiotomy

Conclusions

There is an urgent need for evidence based practice guidelines for specific maternal and fetal indications for episiotomy. a program aiming at continuous improvement in quality of care after episiotomy including various actions like training courses, an audit of current episiotomy practice and outcomes based on delivery room registration of the episiotomies that have been performed, survey of maternity care providers knowledge and attitudes towards episiotomy, number of staff skilled in conducting and repairing episiotomies to reduce the rate of episiotomy.

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