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Chapter

Perineal Management and Episiotomy Practice in Chile

*Cristhel K. Fagerstrom-Sade, Sara Parada-Ibañez,
Marcela M. Gurovich, Esther Ayala-Pérez,
Pablo Ortega-Plancic, Jaime Roa-Burgos,
Fabián Vasquez-Vergara and Jorge Rodríguez-Suazo*

Abstract

Episiotomy is a common intervention used during the second stage of delivery. Current use of this procedure is restricted to certain births due to several complications. Almost all births in Chile are delivered by a gynecologist or a midwife in the public or private health system where episiotomy is performed. The objective of this study is to identify strengths and weakness in aspects of perineal management and episiotomy practice among obstetric health care providers with the purpose of promoting practice assessment and updating skills and competencies. Design: Questionnaire-based-cross-sectional study. Method: Anonymous questionnaire applied to gynecologists and midwives of public and private hospitals, between October and December 2019 using the Instrument designed by Cornet et al. addressing questions such as affiliation, number of births/year, knowledge of anatomy, knowledge of episiotomy, knowledge of perineal tear, competence in perineal repair, and presence of expert in perineal trauma at their unit. Results: 189 surveys responded, 51% from midwives and 37.6% from doctors. 71% of total were trained at their medical or midwifery schools and 69% during postgraduate internships. Episiotomy practice criteria: 19% always in primigravida patients and 14,3% always in premature deliveries. Majority of professionals, 79.4% with less than 100 deliveries a year had incorrect answers about depth or sphincter tear prevention technique. Conclusions: The majority of professionals indicated insufficient training capacities in relation to episiotomy techniques. Undergraduate programs should strength training on this intervention, national guidelines must include routine episiotomy performance in order to unify criteria.

Keywords: episiotomy, episiotomies, midwifery, obstetrics, sphincter injuries, clinical practice, Chile

1. Introduction

In Chile vital statistics and indicators are methodically published by the bureau of vital statistics jointly with the national institute of statistics.

Chile has a mixed health system (public and private) in terms of financing, health insurance, and service delivery. Certified health professionals may work in

either system. Midwives assist the vast majority of normal deliveries at the public service and in the private sector they work cooperatively with the gyn-ob.

Since 1982 until 2016 the rate of deliveries assisted by skilled health personnel, obstetricians or midwives was 99,8% [1]. In 2016 the natality rate was 14,8% with 243.149 live newborns and the population was 18.191.000 inhabitants.

Episiotomy is the most commonly intervention practiced in obstetrics. It is recommended in order to facilitate the second stage of delivery and protect pelvic tissues from lacerations as well as the fetal head. The surgical incision was early described by Fielding (1742), Michaelis (1799) and Braun (1857) and has been widely used since then [2].

The routine practice of episiotomy has resulted in many researchers questioning the very purpose of this procedure as well as its potential benefits. Nowadays it is restricted [3] to certain deliveries because of the complications and long term outcomes such as infection, edema, pain, laceration or tearing into perineal muscles, bleeding, urinary and fecal incontinence and also esthetic defects [4–6].

If mediolateral episiotomy is practiced with an angle further than 45-60 degree it will not attain greater median levator muscle relaxation. When episiotomy is too short usually will not reduce perineal tissue stress and may provide a weak angle for uncontrolled laceration [2, 7], therefore inappropriate techniques hold greater risks of rectal sphincter injuries [8].

Medio-lateral episiotomy may prevent the recurrence of obstetric anal sphincter injuries (OASIS) specially in women with history of anal sphincter tears in previous deliveries [9], fetal macrosomia [10], nulliparity [11], first vaginal delivery with previous cesarean section, and a prolonged second stage of labour [10, 12], though discordant benefits have been reported with this procedure [13].

Even though there has been general agreement about restrictive episiotomy recommendations [14–16], available data demonstrates that professional viewpoints [17, 18], indications and individual patient conditions [19], are up until now associated with a large rate of episiotomies [20–23]. Correct categorization of patients based on professional abilities and skills [7, 24] as well as risk factors [8] are very important in order to prevent OASIS [25].

Events affecting episiotomy recovery are technique used, incision extension, and third or fourth degree tear after procedure [2].

A British study about midwifery practice describes that concealed anal sphincter tears showed a twofold increment when re-evaluated by a qualified health professional [26]. Still, only 17% of midwives tend to perform a rectal examination [27].

This study was designed to find out the principal strengths and weakness around birth assistance and determine doctors and Midwives competencies in aspects of perineal management and episiotomy practice in Chile, with the purpose of promoting professional practice assessment and updating skills and competencies.

2. Material and methods

A questionnaire-based-cross-sectional study was conducted. We used an anonymous questionnaire sent by mail to midwives and doctors attending births at one or more public and/or private maternity units in order to identify competencies in aspects of perineal management and episiotomy practice. This study took place between October and December 2019 using the Instrument designed by Cornet et al. [28] Fourteen close-ended questions were incorporated in relation to: profession, affiliation, number of births/year, evaluation on the knowledge of anatomy, evaluation on the knowledge of episiotomy, evaluation of the knowledge of perineal tear and competence in perineal repair, and presence of expert in

perineal trauma in his/her unit. Study criteria included certified Obstetrician-Gynecologists and Midwives currently assisting births either at the public or private health system in Chile.

3. Data collection

Initially a pilot study was applied to 18 midwives and obstetricians working at one public hospital in Santiago, during July 2019. After some question corrections, the anonymous questionnaire was sent by means of social media to certified health professionals who assisted deliveries in Chile between October and December 2019. We convoked 189 respondents.

4. Data analysis

A data base was constructed through an Excel file and data were analyzed through the statistical package STATA version 15.0®. A descriptive assessment was primarily carried out. Categorical variables were described in terms of frequencies and proportions. Chi square test was used to establish relationship between variables. Significance level was 5%.

5. Findings

189 surveys were returned, 97 (51,3%) from midwives and 71 (37,6%) from obstetricians. 11% did not state profession. 57% of respondents attend deliveries exclusively at the public health system, 19% at the private system and 14.3% in both (**Table 1**).

70% of participants were trained in episiotomy practice at their undergraduate schools and 69% at medical internships.

The majority of professionals assisted between 20 and 100 deliveries per year and 2,2% of them assisted 500 or more (**Figure 1**).

Regarding episiotomy criteria, there was no homogeneity in their practice, but it is clear that the majority do not perform this procedure as a sphincter injury prevention technique when risk conditions arise (**Table 2**).

When data is divided by groups, professionals who assist ≤ 100 deliveries/year had more incorrect answers concerning prevention of deep sphincter or perineal injuries vs. those assisting 100 or more deliveries (79.4%) $p < 0.05$ (**Table 3**).

Entity of work	N	%
Public hospital	(109)	57.7
Private maternity	(34)	18
Public and private practice	(27)	14.3
Home delivery	(4)	2.1
Not responded	(15)	7.9
Total	189	100

Source: Survey "Diagnosis and management of episiotomies" OASI.

Table 1.
Affiliation.

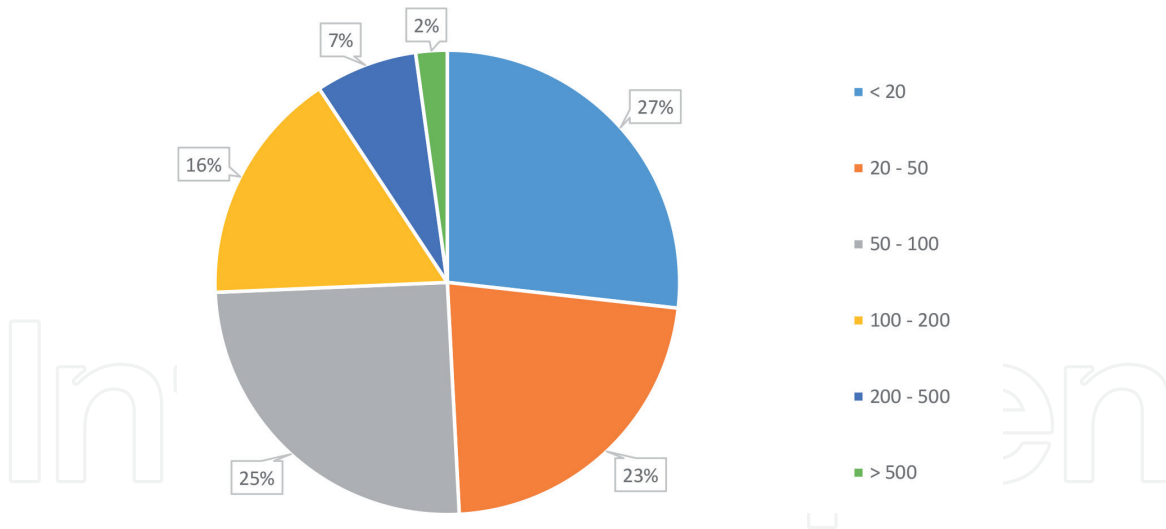


Figure 1.
N° of deliveries attended by the respondents per year.

Condition	Performing episiotomy		Not performing episiotomy	
	N	%	N	%
Primigravida	(36)	19,1	(153)	81
Foetus estimated weight > 3800 grs	(56)	29,6	(133)	70,4
Genitals with edema	(62)	32,8	(127)	67,2
Vulvar varicose veins	(22)	11,6	(167)	88,4
Instrumental delivery	(169)	89,4	(20)	10,6
Preterm birth	(27)	14,3	(162)	85,7
Persistent occiput posterior position	(66)	34,9	(123)	65,1

Source: Survey “Diagnosis and management of episiotomies” OASI.

Table 2.
Criteria for episiotomy utilization.

Condition	<100 deliveries/year		>100 deliveries/year		Total	
	N	%	N	%	N	%
Properly performed	33	63,5	19	36,5	52	28.4
Improperly performed	104	79.4	27	20,6	131	71.5

Source: Survey “Diagnosis and management of episiotomies” OASI Test $\chi^2 p < 0.05$.

*N = 183 respondents to both questions.

Table 3.
Quality of episiotomy performance/N° of deliveries per year.

According to self-report questionnaire 28.4% of participants perform this procedure in a correct manner.

Routine rectal examination was performed by 53.3% of participants, in contrast 5.4% never practiced this type of digital exam when assessing perineal trauma (Table 4). This is an interesting figure considering that professionals assisting <100 deliveries per year performed a higher frequency of rectal examination but no significant difference was demonstrated between groups (Table 5).

	n	%
Always	(99)	53.2
Tear or laceration of tissue	(71)	38.2
Rectal sphincter injury (bleeding)	(3)	1.6
Post instrumental delivery	(3)	1.6
Never	(10)	5.4
Total	186	100

Source: Survey "Diagnosis and management of episiotomies" OASI.

Table 4.
 Rectal examination criteria.

Delivery N	Always	Tears	Rectal bleeding	Post instrumental delivery	Never
<100 deliveries/year	68	54	3	2	10
	69.4%	14%	100%	100%	100%
>100 deliveries/year	30	16	0	0	0
	30.6%	22,9%	0	0	0
Total	98	70	3	2	10
	100%	100%	100%	100%	100%

Source: Survey "Diagnosis and management of episiotomies" OASI Test χ^2 $p = 0.147$.

Table 5.
 Rectal examination/N° of deliveries.

6. Discussion

In 2007 the National Ministry of Public Health published the clinical guide for humanized care during delivery with the main objective of providing access to all pregnant women for appropriate professional assistance during labor and delivery. This assistance guideline draw attention to intra-partum fetal monitoring and other medical interventions such as episiotomy practice. In spite of the recommendation regarding this practice, few other aspects are addressed namely the competencies needed to perform this intervention in order to avoid tears and other adverse events.

Our study demonstrates that near 30% of professionals lack specific episiotomy technique training. This aspect is thoroughly relevant in light of the international evidence assuring that a correct execution of the episiotomy may have significant implications in OASIS. This is the reason why many authors endorse supervised episiotomy practice when training midwives and doctors, with a minimum number of ten before they are permitted to practice [29].

Individual interpretation of whatever particular situation for practicing episiotomies varied among participants of our study. This aspect was also observed in the study published by Gonzalez-Diaz et-al (2015) [30] therefore it is pertinent to regulate this practice and secure a uniform standard technique, also to establish a common and precise criteria with regard to specific clinical situations that need to be approached by this intervention [30].

Although there are post graduate episiotomy training opportunities, still we have professionals that do not perform this technique in a correct fashion.

Considering the international recommendations, when the third stage of labour is completed, a rectal examination should be carried out in order to correctly assess

rectal sphincter injuries [30], [31]. We point out that 46,7% of our participants did not perform this recommendation in every delivery, of these, 5.4% revealed they never practiced the examination and 1.6% performed rectal examination solely under rectal bleeding, also 1.6% respondents when assisting an instrumental delivery.

Following data analysis, it becomes evident that there is a need of a particular guideline for health professionals addressing the correct management of perineal injury prevention and a precise practice of episiotomy. Also, there is the need to promote more training at midwifery and medical schools so to secure the precise abilities and practical skills to correctly perform this technique. At the same time, we should broaden the capacity of continuous training courses for these professionals.

7. Conclusion

The majority of health professionals who attend deliveries in Chile work in public hospitals and indicated insufficient training capacities in relation to episiotomy techniques. Criteria for episiotomy utilization is diverse and heterogeneous with no agreement of absolute indications of the procedure.

8. Suggestions

National guideline for health professionals addressing the correct management of perineal injury prevention, precise practice of episiotomy, proper diagnostic techniques of severe perineal trauma and correct perineal repair.

To improve and strengthen specific formal training programs regarding OASI management and major tears repair and implementing simulation training opportunities and expertise during internships and residence years.

To increase research in this and similar topics.

9. Strengths

First study in Chile about episiotomy practice among obstetricians and midwives.

Survey addressing delivery practices along the territory.

Anonymous survey which facilitates honest answers.

10. Limitations of the study

Limited number of participants in order to assess significant differences.

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Authors' contributions

All the authors of the manuscript actively participated in the conception, design and analysis of the study and in the writing of the manuscript and approve the manuscript as submitted.

Conflict of interest

None.

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Author details

Cristhel K. Fagerstrom-Sade^{1*}, Sara Parada-Ibañez², Marcela M. Gurovich³,
Esther Ayala-Pérez², Pablo Ortega-Plancic⁴, Jaime Roa-Burgos⁴,
Fabián Vasquez-Vergara⁵ and Jorge Rodriguez-Suazo²

1 Universidad del Desarrollo, Santiago, Chile

2 Universidad San Sebastián, Santiago, Chile


3 Universidad Bernardo O'higgins, Santiago, Chile

4 Clínica Dávila, Santiago, Chile

5 INTA, Universidad de Chile, Santiago, Chile

*Address all correspondence to: c.fagerstrom@udd.cl

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References

- [1] Serie Nacimientos 2000-2015. http://www.deis.cl/wp-content/uploads/2011/05/SerieNacimientos_2000_2015.html. Accessed December 17, 2019.
- [2] Muhleman MA, Aly I, Walters A, Topale N, Tubbs RS, Loukas M. To cut or not to cut, that is the question: A review of the anatomy, the technique, risks, and benefits of an episiotomy. *Clin Anat*. 2017;30(3):362-372. DOI:10.1002/ca.22836
- [3] Nassar AH, Visser GHA, Ayres-de-Campos D, et al. FIGO Statement: Restrictive Use Rather than Routine Use of Episiotomy. *Int J Gynecol Obstet*. 2019;146(1):ijgo.12843. DOI:10.1002/ijgo.12843
- [4] Sagi-Dain L, Sagi S. Indications for episiotomy performance – A cross-sectional survey and review of the literature. *J Obstet Gynaecol (Lahore)*. 2016;36(3):361-365. DOI:10.3109/01443615.2015.1065233
- [5] Espuña-Pons M, Solans-Domènech M, Sánchez E. Double incontinence in a cohort of nulliparous pregnant women. *Neurourol Urodyn*. 2012;31(8):1236-1241. DOI:10.1002/nau.22249
- [6] Lowder JL, Burrows LJ, Krohn MA, Weber AM. Risk factors for primary and subsequent anal sphincter lacerations: a comparison of cohorts by parity and prior mode of delivery. *Am J Obstet Gynecol*. 2007;196(4):344.e1-344.e5. DOI:10.1016/j.AJOG.2006.10.893
- [7] Andrews V, Thakar R, Sultan AH, Jones PW. Are mediolateral episiotomies actually mediolateral? *BJOG An Int J Obstet Gynaecol*. 2005;112(8):1156-1158. DOI:10.1111/j.1471-0528.2005.00645.x
- [8] P.M. L, T. V, R. C. Systematic overview of outcomes of third and fourth degree perineal tears in episiotomies versus no episiotomies. *Int Urogynecol J Pelvic Floor Dysfunct*. 2014;25(1):S134-S135. <http://www.embase.com/search/results?subaction=viewrecord&from=export&id=L71591620>.
- [9] Van Bavel J, Ravelli A, Abu-Hanna A, Mol B, Roovers J, De Leeuw J. The effect of a mediolateral episiotomy on the recurrence of obstetrical anal sphincter injury (OASI): An analysis of a national registry. *Int Urogynecol J*. 2018;29. DOI:10.1007/s00192-018-3752-x
- [10] van Bavel J, Ravelli ACJ, Abu-Hanna A, Roovers J, Mol BW, de Leeuw JW. Risk factors for the recurrence of obstetrical anal sphincter injury and the role of a mediolateral episiotomy: an analysis of a national registry. *BJOG An Int J Obstet Gynaecol*. 2020;n/a(n/a). DOI:10.1111/1471-0528.16263
- [11] Verghese TS, Champaneria R, Kapoor DS, Latthe PM. Obstetric anal sphincter injuries after episiotomy: Systematic review and meta-analysis. *Int Urogynecol J*. 2016;27(10):1459-1467. DOI:10.1007/s00192-016-2956-1
- [12] Garmi G, Peretz H, Braverman M, Berkovich I, Molnar R, Salim R. Risk factors for obstetric anal sphincter injury: To prolong or to vacuum? *Midwifery*. 2016;34. DOI:10.1016/j.midw.2015.11.012
- [13] Hartmann K, Viswanathan M, Palmieri R, Gartlehner G, Thorp J, Lohr KN. Outcomes of routine episiotomy: A systematic review. *J Am Med Assoc*. 2005;293(17). DOI:10.1001/jama.293.17.2141
- [14] American College of Obstetricians-Gynecologists. ACOG Practice Bulletin. Episiotomy. Clinical Management Guidelines for

- Obstetrician-Gynecologists. Number 71, April 2006. *Obstet Gynecol.* 2006;107(4):957-962. <http://www.ncbi.nlm.nih.gov/pubmed/16582142>. Accessed January 6, 2020.
- [15] Routine vs selective episiotomy: a randomised controlled trial. *Lancet.* 1993;342(8886-8887):1517-1518. DOI:10.1016/S0140-6736(05)80085-6
- [16] Koskas M, Caillod A-L, Fauconnier A, Bader G. Impact maternel et néonatal des Recommandations pour la pratique clinique du CNGOF relatives à l'épisiotomie. Étude unicentrique à propos de 5409 accouchements par voie vaginale. *Gynécologie Obs Fertil.* 2009;37(9):697-702. DOI:10.1016/J.GYOBFE.2009.06.003
- [17] Ma K, Byrd L. Episiotomy: What angle do you cut to the midline? *Eur J Obstet Gynecol Reprod Biol.* 2017;213:102-106. DOI:10.1016/j.ejogrb.2017.04.006
- [18] Reynolds JL. Reducing the frequency of episiotomies through a continuous quality improvement program. *CMAJ.* 1995;153(3):275-282. <http://www.ncbi.nlm.nih.gov/pubmed/7614443>. Accessed December 12, 2019.
- [19] Steiner N, Weintraub AY, Wiznitzer A, Sergienko R, Sheiner E. Episiotomy: The final cut? *Arch Gynecol Obstet.* 2012;286(6):1369-1373. DOI:10.1007/s00404-012-2460-x
- [20] Sheiner E, Levy A, Walfisch A, Hallak M, Mazor M. Third degree perineal tears in a university medical center where midline episiotomies are not performed. *Arch Gynecol Obstet.* 2005;271(4):307-310. DOI:10.1007/s00404-004-0610-5
- [21] Carroli G, Mignini L. Episiotomy for vaginal birth. *Cochrane database Syst Rev.* 2009;(1):CD000081. DOI:10.1002/14651858.CD000081.pub2
- [22] Vendittelli F, Rivière O, Crenn-Hébert C, et al. Réseau Sentinelle Audipog 2004-2005. Partie 2: évaluation des pratiques professionnelles. *Gynécologie Obs Fertil.* 2008;36(12):1202-1210. DOI:10.1016/J.GYOBFE.2008.08.011
- [23] Frass KA, Al-Harazi AH. Episiotomy is still performed routinely in Yemeni women. *Saudi Med J.* 2010;31(7):764-767. <http://www.ncbi.nlm.nih.gov/pubmed/20635009>. Accessed January 6, 2020.
- [24] Räsänen S, Selander T, Cartwright R, et al. The Association of Episiotomy with Obstetric Anal Sphincter Injury – A Population Based Matched Cohort Study. *Obukhov AG, ed. PLoS One.* 2014;9(9):e107053. DOI:10.1371/journal.pone.0107053
- [25] Räsänen S, Cartwright R, Gissler M, et al. Changing associations of episiotomy and anal sphincter injury across risk strata: Results of a population-based register study in Finland 2004-2011. *BMJ Open.* 2013;3(8):e003216. DOI:10.1136/bmjopen-2013-003216
- [26] Andrews V, Sultan AH, Thakar R, Jones PW. Occult anal sphincter injuries – Myth or reality? *BJOG An Int J Obstet Gynaecol.* 2006. DOI:10.1111/j.1471-0528.2006.00799.x
- [27] Bick DE, Ismail KM, Macdonald S, Thomas P, Tohill S, Kettle C. How good are we at implementing evidence to support the management of birth related perineal trauma? A UK wide survey of midwifery practice. *BMC Pregnancy Childbirth.* 2012;12. DOI:10.1186/1471-2393-12-57
- [28] Cornet A, Porta O, Piñeiro L, Ferriols E, Gich I, Calaf J. Management of Obstetric Perineal Tears: Do obstetrics and gynaecology residents receive adequate training? Results of an anonymous survey. *Obstet Gynecol Int.* 2012. DOI:10.1155/2012/316983

[29] Wong KW, Ravindran K, Thomas JM, Andrews V. Mediolateral episiotomy: Are trained midwives and doctors approaching it from a different angle? *Eur J Obstet Gynecol Reprod Biol.* 2014;174:46-50. DOI:10.1016/j.ejogrb.2013.12.002

[30] Gonzalez-Díaz E, Fernández Fernández C, Fernández Corona A. Differences in characteristics of mediolateral episiotomy in professionals at the same hospital. *J Matern Neonatal Med.* September 2015:1-5. DOI:10.3109/14767058.2015.1086328

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