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Martinez Franco E[1], Cassadó Garriga J[2], Amat Tardiu L[3], Simó González M[4], Huguet Galofré E[2], on behalf of Secció Catalana de Sòl Pelvià (SCOG) -[5]

1. *Parc Sanitari Sant Joan de Déu,* ***2.*** *Hospital Universitari Mútua de Terrassa,* ***3.*** *Hospital Sant Joan de Déu,* ***4.*** *Hospital Sant Pau,* ***5.*** *Societat Catalana d'Obstetrícia i Ginecologia*

HOW TO PERFORM A PROTECTIVE MEDIOLATERAL EPISIOTOMY: RESULTS BEFORE AND AFTER A WORKSHOP.

Hypothesis / aims of study

Episiotomy is one of the most commonly performed surgical procedures worldwide. In order to reduce the OASIs (protective episiotomy), last studies recommend that it should be performed at 60° to the vertical axis when the fetal head is crowning. However, the evidence shows that there is a high degree of variability among episiotomy incisions.

The objective of our study was to investigate how a mediolateral episiotomy was described and depicted before and after a workshop addressed to trainees.

Study design, materials and methods

All the trainee attendants, obgyn and midwives, to a workshop about pelvic floor dysfunctions where invited to complete a questionnaire and draw an episiotomy in a Tincello's diagram (1) at the beginning of the course. Once the workshop about episiotomy was finished, they repeated the picture.

In the questionnaire, they were asked about their experience, the technique of episiotomy and the reasons to perform an episiotomy.

The answers were analyzed. The correlation between the written and the depicted angle and length of the episiotomy was calculated. The difference between the angle, the length of the episiotomy and the distance from beginning of episiotomy to the midline, before and after the workshop was also studied.

Results

A total of 43 trainee doctors and 11 trainee midwives assisted to the workshop. 48 of them completed both evaluations (after and before).

19 (35,18%) have done <10 supervised episiotomies, 15 (27,78%) between 10 – 20 and 20 (37,03%) >20.

42,30% (22) of them have performed <10 unsupervised episiotomies, 13 (25%) between 10 and 20 and 31,48% (17) more than 20 episiotomies alone.

The enumerated reasons to perform an episiotomy were: 38 (70,37%) fetal distress, 22 (40,74%) rigid perineum, 16 (29,63%) to avoid OASI, 15 (27,78%) in imminent perineal tear, 9 (16,67%) in instrumental deliveries, 2 (3,70%) to avoid levator ani tear, 2 (3,70%) to facilitate cicatrization, 2 (3,70%) macrosomia, 1 (1,85%) to avoid shoulder dystocia and 1 (1,85%) in breech deliveries.

The anatomical structures affected by the episiotomy are shown in table 1.

The characteristics of the written and depicted episiotomy are shown in table 2. Before the workshop only 7 (12,96%) people wrote that the episiotomy might be between 51º and 60º and 14 (26,41%) depicted the episiotomy in the diagram with an angle between 51 and 60º.

There were no statistically significant differences between the written and the depicted angle before the workshop (p=0,69), but the agreement between them was poor (ICC: 0,091, 95% IC (-0,17-0.34)). However, the episiotomy length was significantly longer when it was describe than depicted (p=0). The agreement between the written and the depicted length was fair (ICC: 0,27, 95% IC (0,003-0,5).

There were no statistically significant differences between the characteristics of the episiotomies between the less and the more experienced assistants (p=0,68 for angle and p=0,62 for length).

Once the workshop was finished, 1 depicted the episiotomy at 45º, 36 (75%) depicted the episiotomy between 51 and 60º and 22,91% (11) with more than 65º to the midline. The differences between the first depicted angle and the second, were statistically significant (p=0). The episiotomies were also statistically significant (p=0) longer (22,63 vs 30,04 mm).

Interpretation of results

At the beginning of the workshop the majority of the assistants did not know that a protective episiotomy should be done at 60º from the midline. A protective episiotomy was described and depicted at more or less 45º.

The information about the affected structures with an episiotomy is in general good but 26% of assistants thought that the levator ani muscles were also cut.

The agreement between the information written and depicted about episiotomy trigonometry was poor, so the theoretical concepts they had were different that what they did in practise.

Concluding message

Anatomy knowledge of the pelvic floor muscles should be improved in trainees.

The majority of the described and depicted episiotomies did not fulfil the standard criteria for a protective episiotomy. This changed after a workshop was given.

Therefore, it is important to promote "protective episiotomy" workshops on how to perform and repair the episiotomy

Structure	Bulbocavernous muscle	Transverse perineus muscle	Levator ani muscle	Vaginal mucosa	skin	Isquiocavernous muscle	Bulborrectal muscle	Perineal muscles
N (%)	48 (88,89%)	41 (75,92%)	14 (25,92%)	9 (16,67%)	5 (9,26%)	2 (3,7%)	2 (3,7%)	1 (1,85%)

Table 1: Anatomic structures affected by the episiotomy

	Mean	Range
Written angle (º)	46,13±7,83	30-70
Depicted angle (1) (º)	46,30±10,22	24-72
Depicted angle (2) (º)	61,67±5,42	45-70
Written length (mm)	30,00±7,81	15-50
Depicted length (1) (mm)	22,79±8,34	11-54
Depicted length (2) (mm)	30,04±7,08	20-50
Distance from beginning of episiotomy to midline (1) (mm)	9,77±8,42	0-28
Distance from beginning of episiotomy to midline (2) (mm)	,56±1,89	0-9

Table 2: Trigonetric information of episiotomy

References
1. Tincello DG, Williams A, Fowler GE, Adams EJ, Richmond DH, Alfirevic Z (2003) Differences in episiotomy technique between midwives and doctors. BJOG 110:1041-44.

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