Perineal trauma and the role of episiotomy in operative vaginal delivery

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Popular!
Open your mind!!

Joshua Billings (1818 – 1885):

“The trouble with people is not that they don't know, but that they know so much that ain't so.....”

Hippocrates (460 B.C. – 370 B.C.)

“There are in fact two things, science and opinion; the former begets knowledge, the latter ignorance.....”
Contradictory?

Episiotomy is a perineal trauma in itself
Types of episiotomy

1: Median/midline
2: Modified median
3: J-shaped
4: Mediolateral
5: Lateral
6: Radical lateral (Schuchardt)
7: Anterior

Kalis V, Laine K, de Leeuw JW, Ismail K, Tincello D.
Classification of episiotomy: towards a standardisation of terminology.
Papers on episiotomy?

Always ask yourself the question:

- Which type of episiotomy?
- Uniform use of the type of episiotomy?
- Does it match with the type that I use?
Levels of evidence

Level I: Evidence obtained from at least one properly designed randomized controlled trial.

Level II-1: Evidence obtained from well-designed controlled trials without randomization.

Level II-2: Evidence obtained from well-designed cohort or case-control analytic studies, preferably from more than one center or research group.

Level II-3: Evidence obtained from multiple time series with or without the intervention. Dramatic results in uncontrolled trials might also be regarded as this type of evidence.

Level III: Opinions of respected authorities, based on clinical experience, descriptive studies, or reports of expert committees.
Levels of evidence

U.K

Level A: Consistent Randomised Controlled Clinical Trial, cohort study, all or none (see note below), clinical decision validated in different populations.

Level B: Consistent Retrospective Cohort, Exploratory Cohort, Ecological Study, Outcomes Research, Case-control study; or extrapolations from level A studies.

Level C: Case-series study or extrapolations from level B studies.

Level D: Expert opinion without explicit critical appraisal, or based on physiology, bench research or first principles.

5-7-2016
RCT’s
Routine vs selective episiotomy: a RCT
Argentine Episiotomy Trial Collaborative Group
*Lancet* 1993; 342:1517-18

**Effect of selective or routine mediolateral epi on SPT**

<table>
<thead>
<tr>
<th></th>
<th>Selective</th>
<th>Routine</th>
<th>RR (95-CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nulli’s</td>
<td>1.4%</td>
<td>1.8%</td>
<td>0.79 (0.36-1.72)</td>
</tr>
<tr>
<td>(n=1555)</td>
<td></td>
<td></td>
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<tr>
<td>Primi’s</td>
<td>0.8%</td>
<td>0.9%</td>
<td>0.78 (0.21-2.90)</td>
</tr>
<tr>
<td>(n=1051)</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Total</td>
<td>1.2%</td>
<td>1.5%</td>
<td>0.78 (0.40-1.54)</td>
</tr>
</tbody>
</table>
Conclusions from this study

There is, then, no reliable evidence that routine use of episiotomy has any beneficial effect, and there is clear evidence that it may cause harm.

“..............On the basis of the current available evidence, a policy of routine episiotomy should be abandoned and rates above the 30% found in the selective group of our study cannot be justified........”
Possible consequences??
A RCT of routine versus restrictive use of episiotomy at operative vaginal delivery: a multicentre pilot study
Murphy et al, BJOG 2008;115:1695–1703

<table>
<thead>
<tr>
<th>Mode of delivery in %</th>
<th>Routine (n= 99)</th>
<th>Selective (n= 101)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vacuum</td>
<td>24.2</td>
<td>22.8</td>
</tr>
<tr>
<td>Forceps (non-rotational)</td>
<td>54.6</td>
<td>61.4</td>
</tr>
<tr>
<td>Forceps (rotational)</td>
<td>7.1</td>
<td>5.0</td>
</tr>
<tr>
<td>Caesarean section</td>
<td>5.1</td>
<td>6.9</td>
</tr>
<tr>
<td><strong>Spont. vag. delivery</strong></td>
<td><strong>9.1</strong></td>
<td><strong>4.0</strong></td>
</tr>
<tr>
<td><strong>Episiotomy rate</strong></td>
<td><strong>??</strong></td>
<td><strong>??</strong></td>
</tr>
</tbody>
</table>

5-7-2016
A RCT of routine versus restrictive use of episiotomy at operative vaginal delivery: a multicentre pilot study Murphy et al, BJOG 2008;115:1695–1703

<table>
<thead>
<tr>
<th>Results</th>
<th>Routine</th>
<th>Restrictive</th>
<th>OR (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sphincter lesions</td>
<td>8.1%</td>
<td>10.9%</td>
<td>0.72 (0.28–1.87)</td>
</tr>
</tbody>
</table>

Power calculation:
“A previous retrospective cohort study from the Scottish unit suggested a 7.5% rate of third-degree tears with operative vaginal delivery using episiotomy and 2.5% where episiotomy was avoided.

We estimated that there would be approximately 720 operative vaginal deliveries over a 1-year period for both hospitals, and we aimed to recruit 200 women (28%).”
Operative vaginal delivery and episiotomy

Which type?

With or without episiotomy?

What moment during the procedure?

In which specific patient??
Episiotomy in instrumental delivery: Forceps

Type of episiotomy: probably midline
Rate: 94.2%

Sfincter lesions

<p>| | |</p>
<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Epi</td>
<td>20.6%</td>
</tr>
<tr>
<td>Adj. OR:</td>
<td>???</td>
</tr>
<tr>
<td>Epi</td>
<td>12.7%</td>
</tr>
</tbody>
</table>
Episiotomy in instrumental delivery: Vacuum

Type of episiotomy: probably midline
Rate: 84.7%

Sfincter lesions
Epi +: 17.0 %
Epi -: 5.9 %

Adj.-OR: ???
Episiotomy in instrumental delivery: Vacuum and Forceps

Type of episiotomy: probably midline

Nulliparous
OR: 4.5 (95% CI: 3.7 – 5.4)

Multiparous
OR: 14.6 (95% CI: 10.4)
Episiotomy in instrumental delivery: Forceps

Type of episiotomy: probably mediolateral
Rate: 95.7%

Sfincter lesions

Epi +: 9.1 %
Epi -: 4.7 %

Adj.-OR: 1.88 (0.58 – 6.11)
Episiotomy in instrumental delivery: Vacuum

Type of episiotomy: probably mediolateral
Rate: 71.3%

Sfincter lesions

Epi +: 2.3 %
Epi -: 1.7 %

Adj.-OR: 1.93 (0.50 – 7.42)
Episiotomy in instrumental delivery: Vacuum

Van Bavel et al, IUGA 2014

Table 1. Multivariate analysis of the risk of developing OASIS in vacuum deliveries (=159,340)

<table>
<thead>
<tr>
<th></th>
<th>Primiparity (n=130,157)*</th>
<th>Multiparity (n=29,183)*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Adjusted</td>
<td>OR</td>
</tr>
<tr>
<td>OASIS/n (%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MLE</td>
<td>2830/113</td>
<td>0,14</td>
</tr>
<tr>
<td></td>
<td>619 (2,5 %)</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>2317/16</td>
<td>ref</td>
</tr>
<tr>
<td>MLE</td>
<td>515 (14,0 %)</td>
<td></td>
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</tbody>
</table>
Episiotomy in instrumental delivery: Forceps

Van Bavel et al, IUGA 2014

<table>
<thead>
<tr>
<th>Table 2 Multivariate analysis of the risk of developing OASIS in forceps deliveries (n=11,629)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primiparity (n=9,855)</td>
</tr>
<tr>
<td>----------------------</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>MLE</td>
</tr>
<tr>
<td>No</td>
</tr>
</tbody>
</table>
In Summary

Eason et al, Obstet and Gynecol 2000 (Sys review):

…..”One anal sphincter tear would be avoided for every 18 women whose delivery was assisted by vacuum rather forceps”…

Searching the literature (2007):

Forceps less risk than vacuum: 1 study
Equal risk of forceps and vacuum: 5 studies
Forceps larger risk than vacuum: 35 studies
Episiotomy in instrumental delivery:

Bagesthan et al O&G 2010, Norway, 1,673,442 women, 1967-2004

Nulli’s:
Episiotomy protected for OASIS: OR: 0.8 (95% CI: 0.76 – 0.9)

Multi’s:
No protection for OASIS in multi’s with episiotomy:
OR: 0.8 (95% CI: 0.6 – 1.1)
Drawbacks?

Macleod et al. Morbidity experienced by women before and after operative vaginal delivery. BJOG 2013;120:1020-1027

Restrictive episiotomy use was associated with:

• Higher incidence of perineal pain in the immediate postpartum period
  RR 1.10, 95% CI 1.01–1.21

• Greater psychological morbidity in the immediate postpartum period
  P < 0.01

• More stress urinary incontinence at 6 weeks postpartum
  RR 1.55, 95% CI 1.00–2.40)
Episiotomy in instrumental delivery

When during the procedure?

Before or after applying forceps blades or vacuum-cup?

Nobody knows the definitive answer

But every obstetrician is an expert!
Conclusions

Large differences between continents and countries

Be careful with extrapolation of the results of RCT’s on episiotomies

Forceps or vacuum?  \[\rightarrow\] Vacuum!

Midline episiotomy in instrumental delivery: No!

Mediolateral episiotomy in instrumental delivery:

Think twice if you think that your patient is better of without it!