Author’s response to reviews

Title: Anal incontinence, urinary incontinence and sexual problems in primiparous women - a comparison between women with episiotomy only and women with episiotomy and obstetric anal sphincter injury.

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Author’s response to reviews: see over
Dear Dr Palacios

Please find enclosed our revised manuscript entitled:

*Anal incontinence, urinary incontinence and sexual problems in primiparous women – a comparison between women with episiotomy only and women with episiotomy and obstetric anal sphincter injury.*

We are grateful to the editor and the three reviewers for all important and helpful comments on this manuscript. We greatly appreciate the input. Please find our enclosed revised version that will hopefully address the concern in the reviews and our detailed responses below.

Thank you for further consideration.

Sincerely,

Mona Stedenfeldt
Referee 1: Thank you for your recommendation and addressing grammar/typos to be corrected. It is very much appreciated.

p4 line 99 should be "sufficient length and depth reduced the risk."

Answer: corrected

p5 line 116 "OASIS that" should be "OASIS who"

Answer: corrected

p6 line 122 "Hospitals electronic" should be "hospitals' electronic"

Answer: corrected

p9 line 197 "there significant" should be "there was significant"

Answer: corrected

p11 line 246 "episiotomies characteristics" should be "episiotomy characteristics"

Answer: corrected

Referee 2: Thank you for your effort and recommendation.

Referee 3: Many thanks for your time and input. In response to your specific comments:

Major Compulsory Revisions:

1. The results section in the abstract is slightly unclear. At one point the authors talk about more women with OASIS reporting AI, sexual pain and less desire compared to women without OASIS. However, percentages and odds ratios are presented in the same sentence. The interpretation of the OR in this case is very confusing and unclear.

   Answer: Thank you for pointing that out to us. We agree that the wording, percentage and OR given are confusing. We have changed the wording and added OR for AI in women with OASIS as this:
“More women with OASIS reported AI: 14 (38%) vs. 3 (8%) p = 0.05 (OR 4.66, 95% CI 1.34-16.33). Women with OASIS also had lower score on sexual pain and desire (low score = more problems) p = 0.05 (OR 0.69, 95% CI 0.47-0.99) and p=0.04 (OR 0.65, 95% CI 0.43-0.98) respectively compared to women without OASIS.”

2. Is it valid to create an overall sexual problem score by adding up likert scales and then categorising the overall score? Is this a validated method?

Answer: Thank you, we do agree. This was pointed out to us in the last referee round. It is true that we do not have the documentation supporting this to be a valid method. We then removed statistics that included these variables, but unfortunately we missed the description of the calculation of the variables in the method section. We have now removed the following sentence:

“The responses from all three items were then added together to produce an overall score from 0 to 15. Sexual problems were then categorized as 0-3= “all the time,” 4-6= “almost all the time,” 7-10 = “quite often,” 11-14= “quite rarely”, and 15= “never”.”

3. In Table 2, sexual problems were measured on a likert scale, summed and then categorised, yet the ORs are reported in terms of unit increase in score point. This is a categorical variable and it should be analysed as a categorical variable.

Answer: Thank you for pointing that out. We have revised the statistical analyses of sexual problems. We defined four categories: score 1+2, score 3, score 4 and score 5. The reason we grouped scored 1 and 2 together was that there were empty cells. The calculations are shown in figure1 in this letter, and Table 2 in the manuscript is revised. We have also revised the manuscripts’ text accordingly in the abstract, result and in the discussion. All corrections are marked with red.
4. The second aim was to assess if episiotomy characteristics were associated with AI, UI and sexual problems. Why were episiotomy characteristics and dysfunctions investigated over all patients rather than comparing women with OASIS with women without OASIS? I think it would be much more interesting to look at episiotomy characteristics and OASIS.

Answer: This article is part two of a larger study. In study one we did study the association between episiotomy characteristics and OASIS:


In relation to episiotomy characteristics and pelvic floor dysfunction, we did have dysfunctions in both groups, however significantly less in the OASIS group. We did in an earlier version estimate the correlation between episiotomy characteristic and dysfunction for each group. However, a referee suggested that we changed the approach. Since we are looking at the correlation between episiotomy characteristics and pelvic floor dysfunctions, there is no need to separate the groups for this investigation (as long as the

<table>
<thead>
<tr>
<th>Domain</th>
<th>OASIS</th>
<th>NO OASIS</th>
<th>P</th>
<th>OR</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sexual problem desire</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Score 5 (no problem)</td>
<td>4</td>
<td>16</td>
<td>0.04</td>
<td>6.94</td>
<td>(1.05-45.91)</td>
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<tr>
<td>Score 4</td>
<td>16</td>
<td>12</td>
<td>0.12</td>
<td>3.84</td>
<td>(6.99-21.11)</td>
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<tr>
<td>Score 3</td>
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<td>5</td>
<td>0.02</td>
<td>7.62</td>
<td>(1.30-44.64)</td>
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<tr>
<td>Score 1-2</td>
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<td>4</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Sexual problem orgasm</td>
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<tr>
<td>Score 5 (no problem)</td>
<td>10</td>
<td>19</td>
<td>0.36</td>
<td>2.49</td>
<td>(0.35-17.66)</td>
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<tr>
<td>Score 4</td>
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<td>11</td>
<td>0.90</td>
<td>0.89</td>
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<tr>
<td>Score 3</td>
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<td>5</td>
<td>0.07</td>
<td>3.32</td>
<td>(0.88-12.49)</td>
</tr>
<tr>
<td>Score 1-2</td>
<td>3</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sexual problem with pain</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Score 5 (no problem)</td>
<td>16</td>
<td>22</td>
<td>0.13</td>
<td>4.37</td>
<td>(0.63-30.16)</td>
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<tr>
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<td>7</td>
<td>0.29</td>
<td>0.30</td>
<td>(0.03-2.83)</td>
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<tr>
<td>Score 3</td>
<td>1</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Score 1-2</td>
<td>7</td>
<td>2</td>
<td>0.21</td>
<td>2.44</td>
<td>(0.61-9.75)</td>
</tr>
</tbody>
</table>
correlations do not differ between the groups). Also, assessing the group as a whole does increase the study power.

5. Spearman's correlation was carried out to estimate correlation but was any modelling of the data conducted? No adjustment seems to have been made here or anywhere in the manuscript for any other factors (e.g., age, birth weight etc. in which significant differences between the groups have been seen).

*Answer: That is correct. Spearman's correlation coefficient was calculated to assess the relation between the variables. We used conditional logistic regression modeling in order to adjust for the matched design of our study (instrumental delivery). Further adjustment for other covariates was not performed. We did not adjust for birth weight or head circumference since birth weight in itself will not cause pelvic floor dysfunctions. There are the consequences of high birth weight (as for example: instrumental delivery and pelvic floor injury) that might cause damage and then dysfunctions.*

**Editorial Requirements:**

Please provide full details in your methods section of the permissions obtained to access patient data (birth logs) in each hospital. And to include email address for author BV in the submissions system.

*Answer: The approval obtained to access patient data at each hospital is provided (only one approval is necessary)*

2. Please provide an email for author Barthold Vonen that is unique to him. He is currently listed as having the same email as author Tom Wilsgaard on the submission system.

*Answer: Correct e-mail for author Barthold Vonen is provided.*