OBSTETRIC ANAL SPHINCTER INJURY AND RISK FACTORS- A RECENT REVIEW

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• Declaration of interest- None
Background

- Obstetric anal sphincter injury (OASI) is a complication of vaginal delivery which can have serious impact on a patient’s QoL.

- Increase in rates of OASI was noted and this study was aimed to assess the risk factors for our population.

- A secondary aim was also to examine the relationship between episiotomy and OASI.
Methodology

- This is a retrospective study. Data on all pregnancies between January and December 2012, (excluding caesarean sections and non-vertex presentations) were reviewed (n=6582).

- OASI was defined as a third or fourth degree tears to the anal sphincter muscles.

- Various factors were compared between those that sustained an OASI and those with intact perineum (including 1st and 2nd degree tears).

- Both univariate analysis and multivariate logistic regression were used in the analysis.
Results

- The incidence of OASI was 2.17% (n=143).
- Of those with OASI, 62% were nullipara.
- 40% had an instrumental delivery.
- 47% had a mediolateral episiotomy.
Mode of delivery in patient's with OASI

- SVD: 60%
- Forceps: 29%
- Ventouse: 11%
Rates of episiotomy in patients with OASI

- Ventouse: 93%
- Forceps: 76%
- SVD: 26%

Rates of episiotomy in patients with OASI
Increased risk of OASI

- Forceps OR 7.9 (95% CI 5.4-11.8),
- Ventouse OR 1.7 (95% CI 0.9-2.8),
- Nulliparity OR 2.3 (95% CI 1.6-3.2).
- Episiotomy OR 2.27 (95% CI 1.6-3.2).
Other risk factors

- Higher birth weight (3,749g versus 3,567g; p < 0.01)
- Higher gestational age (40 vs 39.5 weeks, p < 0.01).
- Increase in the length of the second stage of labour (52 minutes versus 38 minutes; p < 0.01);
Second stage of labour in minutes

- Multiparous
  - Intact perineum
  - OASI

- Nulliparous
  - Intact perineum
  - OASI
Further insight into our Episiotomies

- Retrospective review of the trend of variation in rates of episiotomy and OASI in our primigravida population with SVD over the last 10 years.

- The average rate of episiotomies over the past 10 years in primigravida with SVD was 37%, with a 2% rate of OASI.

- The rate of episiotomy relatively increased in the past few years, however, no reduction in OASI was seen.
Incidence of episiotomy & OASI
In
Primigravida having SVD

<table>
<thead>
<tr>
<th>Year</th>
<th>OASI</th>
<th>Episiotomy</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>2.20%</td>
<td>38.60%</td>
</tr>
<tr>
<td>2011</td>
<td>1.80%</td>
<td>49.90%</td>
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<tr>
<td>2010</td>
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<td>51.80%</td>
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<td>2009</td>
<td>2.90%</td>
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<td>2008</td>
<td>2.30%</td>
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<td>2007</td>
<td>2.40%</td>
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<td>39.20%</td>
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<tr>
<td>2005</td>
<td>2.80%</td>
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</tr>
<tr>
<td>2004</td>
<td>3.80%</td>
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<tr>
<td>2002</td>
<td>1.40%</td>
<td>20.40%</td>
</tr>
</tbody>
</table>
Conclusion

- Although our rates of OASI are within normal

- The result of this study reinforces some of the known risk factors associated with OASI including instrumental delivery, nulliparity, increased birth weight and prolonged second stage of labour.

- It also highlights the significant increase in risk associated with forceps delivery (OR 7.9).

- We also found that episiotomy may itself be a significant risk factor for OASI
Conclusion continued

- Further training with instrumental deliveries and perineum guarding
- The importance of selective use of episiotomy
- Continual education regarding appropriate episiotomy technique.