Perineal Trauma Repair - What is the evidence?

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Hon. Director of eLearning, RCOG

Classification of Perineal Tears

<table>
<thead>
<tr>
<th>Degree</th>
<th>Injury</th>
</tr>
</thead>
<tbody>
<tr>
<td>1°</td>
<td>vaginal mucosa or skin</td>
</tr>
<tr>
<td>2°</td>
<td>perineal muscle</td>
</tr>
<tr>
<td>3°</td>
<td>3a - &lt;50% external sphincter</td>
</tr>
<tr>
<td></td>
<td>3b - &gt;50% external sphincter</td>
</tr>
<tr>
<td></td>
<td>3c - internal sphincter involved</td>
</tr>
<tr>
<td>4°</td>
<td>Any 3rd degree + Rectal mucosa</td>
</tr>
</tbody>
</table>

Childbirth and pelvic floor disorders

- >350,000 women experience perineal suturing
- OASIS tripled from 1.8 to 5.9% (2000-2012)

Gurol-Urganci et al, BJOG 2013.

Episiotomy

Classification of episiotomy: towards a standardisation of terminology

V. Kahn, K. Latex, JF de Lebeniec, KM Ismail, DG Tocchini
Episiotomy rates and OASI
Khalafoui M, Kettle C, Ismail KMK

Incidence rates for obstetric anal sphincter injuries

- Nulliparous
- Primiparous/Multiparous
- All Women

Figure 1: Anal sphincter injury incidence rates from 1989-2007

Figure 2: Rates of mediolateral episiotomies from 1989-2007

Angle of episiotomy and risk of OASIS

- 50% reduction in risk of OASIS for every 6° away from the midline
  - Eogan et al., Does the angle of episiotomy affect the incidence of anal sphincter injury? BJOG 2005
- 23% of midwives and 2% of doctors drew a ≤ 30° episiotomy angle
  - Trouville et al., Differences in episiotomy techniques between midwives & doctors. BJOG, 2012
- No midwife and only 22% doctors performed truly mediolateral
  - Andrews et al. Are mediolateral episiotomies actually mediolateral? BJOG, 2005

Method and Materials for repair

Rapid absorbing Polyglactin suture
Continuous non-locking technique
For all layers

Evidence into practice
How good are we?

Availability of unit protocol
- 2nd degree unsutured
- Continuous all layers
- In-house training
- Confident to repair
- PEs for assessment

N = 322
Training equipment

DVD – anatomy, basic surgical skills, identification of trauma, suturing techniques & postnatal care

Keele & Staffs Episiotomy Repair Trainer – developed with Limbs & Things UK Ltd

Implementation

<table>
<thead>
<tr>
<th>Entity details</th>
<th>Mean difference (95% CI)</th>
<th>Paired t-test p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent with continuous non-locking suturing technique for vaginal wall</td>
<td>-15.9% (-22.2%, -9.6%)</td>
<td>P=0.002</td>
</tr>
<tr>
<td>Percent with continuous non-locking suturing technique for muscle layer</td>
<td>-12.9% (-26.3%, -0.9%)</td>
<td>P=0.04</td>
</tr>
<tr>
<td>Percent with subcuticular suturing technique for perineal skin</td>
<td>-4.9% (-21.0%, 2.2%)</td>
<td>P=0.13</td>
</tr>
<tr>
<td>Percent with EBM technique for all layers*</td>
<td>-0.6% (-10.1%, -0.0%)</td>
<td>P=0.64</td>
</tr>
<tr>
<td>Fist abscess, pyoglandular swelling</td>
<td>-17.4% (-34.0%, 2.2%)</td>
<td>P=0.009</td>
</tr>
<tr>
<td>10-12 day spontaneous</td>
<td>-30.7% (-52.9%, -9.3%)</td>
<td>P=0.004</td>
</tr>
</tbody>
</table>

Effect on PROMs

<table>
<thead>
<tr>
<th>Postnatal outcomes</th>
<th>Mean difference (95% CI)</th>
<th>Paired t-test p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Primary outcomes</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percent with pain walking or sitting in past week</td>
<td>0.7% (-10.1%, 11.4%)</td>
<td>P=0.99</td>
</tr>
<tr>
<td><strong>Secondary outcomes</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean score walking and pain scores over the previous 24 hrs</td>
<td>-0.7% (-2.0%, 0.7%)</td>
<td>P=0.56</td>
</tr>
<tr>
<td>Percent needing analgesia removed</td>
<td>2.2% (2.0%, 2.4%)</td>
<td>P=0.03</td>
</tr>
<tr>
<td>Percent taking pain relief for itching in past 24 hrs</td>
<td>-4.3% (-19.0%, 4.5%)</td>
<td>P=0.15</td>
</tr>
<tr>
<td>Percent still breastfeeding</td>
<td>1.9% (0.6%, 3.3%)</td>
<td>P=0.24</td>
</tr>
<tr>
<td>Percent with perineal wound infection since birth</td>
<td>0.6% (0.4%, 0.9%)</td>
<td>P=0.03</td>
</tr>
</tbody>
</table>

Access to MaternityPEARLS

Via StratOG (The RCOG eLearning platform)

OASIS Risk factors

- First vaginal delivery
- Forceps delivery
- Lithotomy position
- Birth weight > 4,000 grams
- Prolonged second stage of labour
- Occipito posterior position
- Episiotomy (Midline)
- Induction of labour
- Epidural anaesthesia

* (RCOG Guideline No 28; Sultan et al 1996; Wood et al 1998)

Recognition of trauma

- Vast amount of sphincter defects are not recognised
- Increased vigilance detection rate may be doubled
  - (Groom & Paterson-Brown 2002)
- PR is as good as endo-anal scan
- Systematic examination of perineal trauma
- Training and awareness
- Create a blame free environment

Primary Repair

OASIS

<table>
<thead>
<tr>
<th>Covariate</th>
<th>Number (%)</th>
<th>OR</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 months N= 182</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>End-to-end</td>
<td>30 (45.99%)</td>
<td>1.00</td>
<td>0.57, 1.93</td>
</tr>
<tr>
<td>Overlap</td>
<td>38 (49.15%)</td>
<td>1.05</td>
<td></td>
</tr>
<tr>
<td>12 months N= 144</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>End-to-end</td>
<td>31 (46.27%)</td>
<td>1.00</td>
<td>0.59, 2.18</td>
</tr>
<tr>
<td>Overlap</td>
<td>38 (49.23%)</td>
<td>1.13</td>
<td></td>
</tr>
</tbody>
</table>
End-to-end Vs Overlap for OASIS

Follow-up of 3rd and 4th degree tears

Multi-Disciplinary Team

- Consultant obstetrician
- Specialist midwife
- Urogynaecologist
- Colorectal surgeons
- Radiologist / radiographer
- Obstetric physiotherapist
- Manometry technician
- Continence advisor

The OASIS Clinic

Follow-up

Asymptomatic
Discharge

Follow-up

Perineal Care Clinic (6 weeks)

Symptomatic
Physiotherapy
Follow-up (6-8 months)
Follow-up Perineal Care Clinic (6 weeks)

- Asymptomatic Discharge
- Symptomatic Physiotherapy
- Follow-up (6-8 months)

Follow-up (6 weeks)

- Symptomatic Physiotherapy
- Follow-up (6-8 months)

Endo-anal scan
Anal amnometry
PC-MDT

Follow-up

Management of subsequent pregnancies

Management of subsequent pregnancies

Antenatal OASIS Clinic

Choice of mode of delivery: Journal of Obstetrics and Gynaecology, 2004

<table>
<thead>
<tr>
<th>Planned mode of delivery</th>
<th>Consultant (N=74)</th>
<th>NCHDS (N=52)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vaginal delivery always</td>
<td>14% (10)</td>
<td>3.8% (2)</td>
</tr>
<tr>
<td>LSCS</td>
<td>14% (10)</td>
<td>5.7% (3)</td>
</tr>
<tr>
<td>Selective LSCS</td>
<td>72.0% (54)</td>
<td>90.4% (47)</td>
</tr>
</tbody>
</table>

MANAGEMENT

- Specific antenatal clinic
- History re- bowel symptoms
- Symptomatic women
  - Dietary manipulation, drugs
    - Physiotherapy, Bio-feed back
- Endo anal scan before 34 weeks.
- Anal manometry
- One stop clinic!
Management of subsequent deliveries

- Vaginal delivery may increase risk of AI
- If symptomatic or abnormal scan – Offer EICS
- If asymptomatic and normal scan – offer VD
- No evidence for prophylactic episiotomy
- NRS evidence for MPP
- Risk of recurrence

Acknowledgement:

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- Professor C Kettle
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