Second Trimester Surgical Abortion

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The methods

• Dilatation and evacuation (D&E) is the recommended method for 2\textsuperscript{nd} trimester surgical abortion
  – Vacuum aspiration with 14 or 16 mm cannula to 16 weeks
  – Hysterotomy or hysterectomy only if trans-cervical infeasible

• D&E most frequent 2\textsuperscript{nd} trimester method of abortion where available
  – Other indications: back up for failed induction; need for rapid evacuation (ROM, bleeding)
  – Choice of medical and surgical ideal

RCOG, 2011; WHO 2012; Stubblefield, 1978
Variations

• **Standard D&E**
  - Serial removal of fetus and placenta through dilated cervix with forceps and vacuum aspiration
  - 1.5-2.5 cm cervical dilation with osmotic dilators, medications, rigid tapered dilators 3-24 hours before evacuation

• **Intact D&E**
  - Intact removal through widely dilated cervix using assisted breech delivery, calvarium decompression if needed
  - 4+ cm achieved with 2+ days osmotic dilators
Osmotic Dilators

- Often called “tents”
- Swell to exert mechanical pressure and stimulate priming
- Number placed gestation and provider dependent
Laminaria

- Dried, sterilized stem of kelp plant
- Range of sizes (2-10 mm diameter, 60-85 mm length)
- Expand 3-4 times dry diameter over 12-24 hours
Dilapan-S

• Synthetic hygroscopic rod
• 3 sizes (3x55mm, 4x55mm, 4x65mm)
• Expands more rapidly, consistently, greater degree
Pharmacologic preparation

- **Misoprostol**
  - 400 mcg vaginal or buccal x 3 h, sublingual x 2h
- **Mifepristone**
  - 200 mg 24-48 h prior
  - Often used with misoprostol 2-3 h prior to evacuation
- **Additional rigid dilation but similar procedure times, ease, complications**
- **Osmotic dilators + misoprostol**
  - Reduces procedure time but more pain

Forceps and vacuum

- **Range of forceps**
  - Allow for controlled extraction
  - Grasp and reduce size of tissue

- **Vacuum aspiration**
  - 12-14 mm cannulae
  - Drain fluid
  - Remove any remaining blood or tissue
Safety and effectiveness

Figure 1. Comparative safety of labour induction abortion vs. dilation and evacuation, by abortifacient and type of study

- Saline: Outcome = Major complication
- Misoprostol: Outcome = Any complication
- PGF2a: Outcome = Any complication
- Mifepristone+misoprostol: Outcome = Adverse event

Grimes DA, RHM 2008
Outcomes: more recent studies

- **Retrospective**
  - Bryant, 2011
    - Total complications: 24% induction vs. 3% D&E (p=<0.001)
    - Retrospective; prostaglandins, oxytocin only
  - Whitley, 2011
    - Total complications: 28% induction vs. 15% D&E (p=0.02)
    - Retrospective; prostaglandins, oxytocin

- **Randomised**
  - Kelly, 2010
    - Total complications: 11.5% induction vs. 12% D&E (p=NS)
    - Randomised trial, mife/miso
<table>
<thead>
<tr>
<th>Complication</th>
<th>D&amp;E (n=23, 185)</th>
<th>Mife/miso (n=1,189)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perforation/uterine rupture</td>
<td>13 0.06</td>
<td>1 0.08</td>
</tr>
<tr>
<td>Bowel/bladder injury</td>
<td>3 0.01</td>
<td></td>
</tr>
<tr>
<td>Cervical injury</td>
<td>25 0.11</td>
<td></td>
</tr>
<tr>
<td>Haemorrhage (transfusion)</td>
<td>3 0.01</td>
<td>5 0.4</td>
</tr>
<tr>
<td>Haemorrhage (no transfusion)</td>
<td>14 0.06</td>
<td>7 0.6</td>
</tr>
<tr>
<td>DIC</td>
<td>1 0.004</td>
<td></td>
</tr>
<tr>
<td>Retained products/clot/placenta</td>
<td>19 0.08</td>
<td>37 3.1</td>
</tr>
<tr>
<td>Infection (any)</td>
<td>18 0.08</td>
<td>3 0.25</td>
</tr>
<tr>
<td>Anaesthetic/drug related</td>
<td>5 0.02</td>
<td>1 0.08</td>
</tr>
<tr>
<td>Extramural delivery</td>
<td>2 0.01</td>
<td>1 0.08</td>
</tr>
<tr>
<td>Failed procedure</td>
<td>1 0.004</td>
<td>4 0.34</td>
</tr>
<tr>
<td>Death</td>
<td>1 0.004</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>105 0.45</td>
<td>59 4.96</td>
</tr>
</tbody>
</table>
If not complications, then what?

- RCT vacuum aspiration (13-14+6) or D&E (15-19+6) vs. mife/miso at 13-20 weeks (n=110)
- Primary outcome impact of event score (IES), measure of stress after traumatic event
- Others
  - General health questionnaire (GHQ) – measure of general distress/short term psychological outcome
  - Hospital anxiety and depression score (HADS)
  - Complications

Kelly T, et al. *BJOG* 2010
Outcomes

• Medical group experienced more
  – Intrusive thoughts after (IES) and distress (GHQ)
  – Bleeding (p = 0.003)
  – Pain on day of procedure (p=0.008)
  – Days of pain (p=0.020)
  – Need for overnight stay (31% vs. 0%)
  – Women finding procedure worse than expected (53% versus 0%, p=0.001)
Outcomes

• More women who had surgical would choose the method again if needed (100% vs. 53%, p<0.001)
  – Of the 107 women who declined to participate in the study, 67% expressed a preference for surgery

• Similar findings to early RCT in USA including the rate of decline to participate because of preference for surgical (62%)

Kelly *BJOG*, 2010; Grimes DA *BJOG* 2004
The four c’s – D&E

Cost

Compassion

D&E

Convenience

Comfort

Grimes *RHM* 2008
The four c’s – medical induction

Common

Compassion

Induction

Convenient

Conscious
International guidance recommends choice of method based on similar risk profile and recognition of differences in process and preferences.

Woman-centred care
Termination for fetal anomaly: are we providing woman centred care?

All Grounds

- Surgical
- Medical

Ground E

- Surgical
- Medical

DH Abortion Stats 2011
Why?

- Patient preference
- Desire for post-mortem
- Need for post-mortem with an intact fetus
- Clinician-centred care
  - Preference
  - Training
  - Motivation
TOPFA: Are women in England given a choice of method?

- Antenatal Results and Choices member survey
  - 351 respondents, mean gestation 17 weeks (range 8-24)
  - 74% only offered medical (54% had chromosomal anomaly)
- Of 351 respondents, 50 (14%) offered choice
  - Of which 60% chose surgical
- Reasons for choosing medical induction
  - Only method offered (88%)
  - Perceived greater safety (10%)
  - Desire for post mortem (9%)
- Reasons for choosing surgical
  - “Could not cope” with medical (60%)
  - Only offered surgical (30%)

Fisher J Obstet Gynecol 2014
Excerpts from patient information leaflets on TOPFA

• Medical termination of pregnancy, which involves the use of medicine, is recommended for women who are having a termination in later stages of pregnancy (after 14 weeks). *This is because it is more dangerous to stretch the cervix after 14 weeks gestation.*

• At your stage of pregnancy, *we feel it is safer* to make the uterus (womb) contract to deliver your baby rather than using a surgical method, which might damage the cervix (neck of the uterus) or the uterus itself.
Utility of D&E specimens for cytogenetic, pathologic examination

- Comparing D&E and induction specimens
  - No difference for chromosome analysis
  - Even in presence of fetal demise
- Lower success with autopsy for structural defects (37% vs. 94%)
- Correlation of pathologic specimens with ultrasound findings may be as low as 50% depending on anomaly
  - Highest for neural tube defects
  - Lower for abdominal wall, multiple organ system

Is a post mortem always indicated?

- No clear guidance about when it is useful
- Structural abnormalities diagnosed on ultrasound
  - Post-mortem provided supplemental information in only 16% of such cases
  - Altered patient counselling regarding future pregnancies in less than 1%

Vogt Ultrasound Obstet Gynecol 2012
Lack of skills and motivation

• Almost all TOPFA in Britain takes place in NHS
  – Few surgeons trained in D&E in NHS
    • More available for TOPFA than other indications
    • Lack of training partnerships
  – Lack of exposure to D&E leads to skepticism
  – Few role models who provide D&E in NHS perpetuates attitude and skill deficiency
Facilitating D&E: a matter of medical ethics

• Beneficence
  – Beneficence requires that D&E be offered, because it is the safest method available. Advocating methods requiring the least skill, independent of patient safety, is inconsistent with this principle
  – Given potential long term psychological morbidity from TOPFA, obligation to provide safest and most compassionate method
  – Does not appear to be a need for intact fetus for autopsy and in many cases no need for autopsy at all

• Autonomy
  – Achieved by facilitating choice
  – Justice equal distribution of resources; choice of abortion methods should not be limited by geography.
Facilitating D&E: a reflection of commitment to choice
Thank you

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