Second Trimester Surgical Abortion

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The methods

- Dilatation and evacuation (D&E) is the recommended method for 2nd trimester surgical abortion
  - Vacuum aspiration with 14 or 16 mm cannula to16 weeks
  - Hysterotomy or hysterectomy only if trans-cervical infeasible

- D&E most frequent 2nd 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

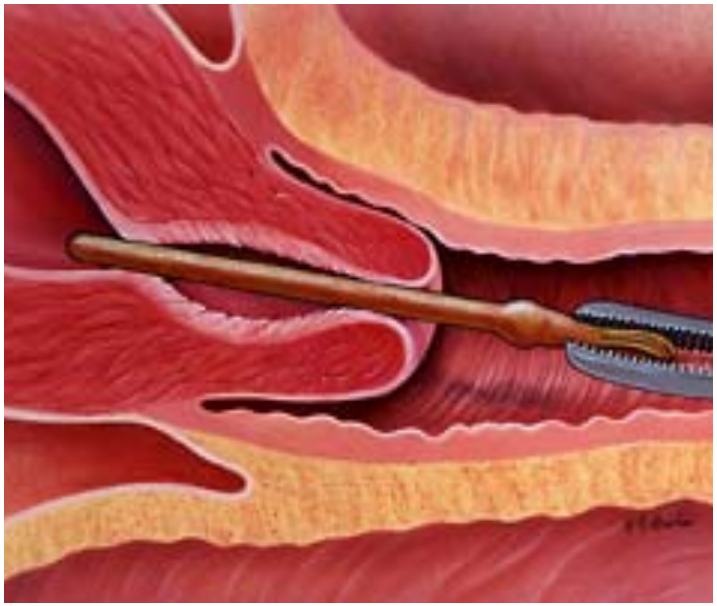
RCOG, 2011; WHO 2012;
Stubblefield, 1978

Variations

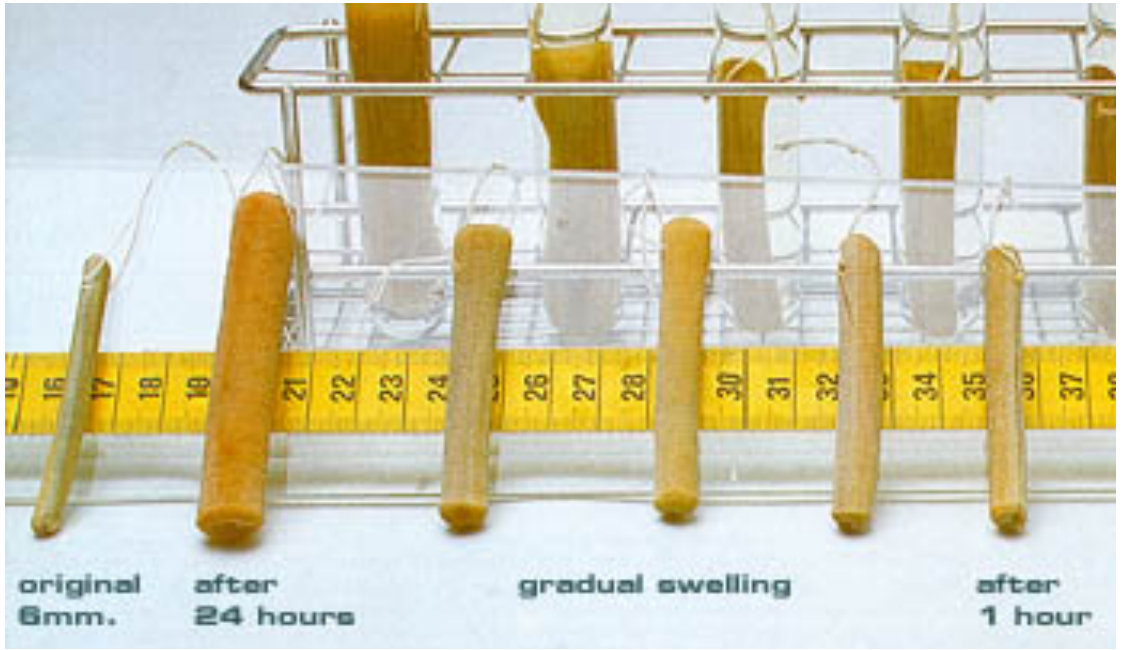
- Standard D&E
  - Serial removal of fetus and placenta through dilated cervix with forceps and vacuum aspiration
  - 1.5-2.5 cm cervical dilation with osmotic dilators, medications, rigid tapered dilators 3-24 hours before evacuation
- Intact D&E
  - Intact removal through widely dilated cervix using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

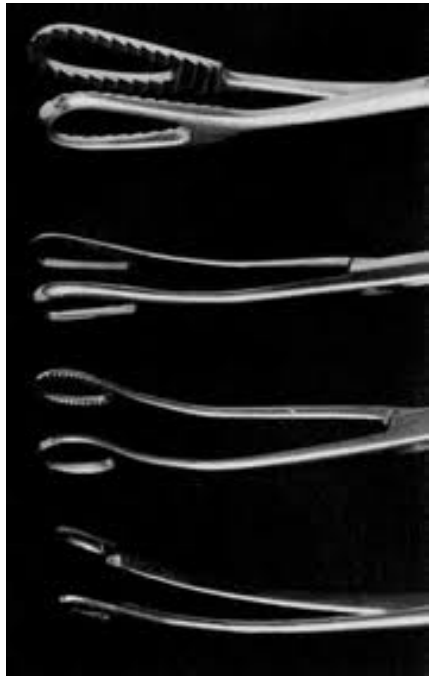
Pharmacologic preparation

- 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

Society of Family Planning, 2014:
Drey *Obstet Gynecol* 2014

Forceps and vacuum

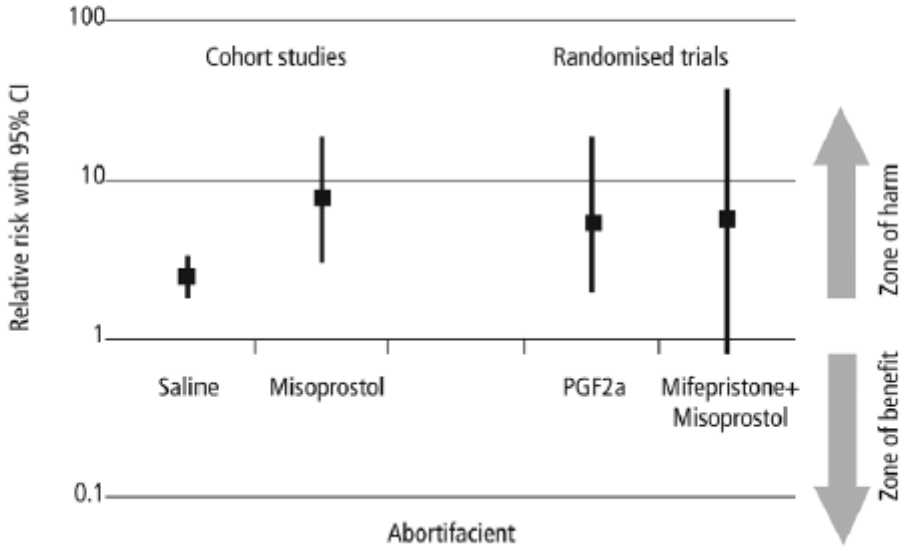
- Range of forceps
  - Allow for controlled extraction
  - Grasp and reduce size of tissue
- Vacuum aspiration
  - 12-14 mm cannulae
  - Drain fluid
  - Remove any remaining blood or tissue



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[9]
Misoprostol: Outcome = Any complication[8]
PGF2a: Outcome = Any complication[7]
Mifepristone+misoprostol: Outcome = Adverse event[6]



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

bpas Complications 14-24 weeks (2009-2013)				
	D&E (n=23, 185)		Mife/miso (n=1,189)	
	n	%	n	%
Perforation/uterine rupture	13	0.06	1	0.08
Bowel/bladder injury	3	0.01		
Cervical injury	25	0.11		
Haemorrhage (transfusion)	3	0.01	5	0.4
Haemorrhage (no transfusion)	14	0.06	7	0.6
DIC	1	0.004		
Retained products/clot/placenta	19	0.08	37	3.1
Infection (any)	18	0.08	3	0.25
Anaesthetic/drug related	5	0.02	1	0.08
Extramural delivery	2	0.01	1	0.08
Failed procedure	1	0.004	4	0.34
Death	1	0.004		
Total	**105**	**0.45**	**59**	**4.96**

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)

Kelly T, et al. *BJOG* 2010

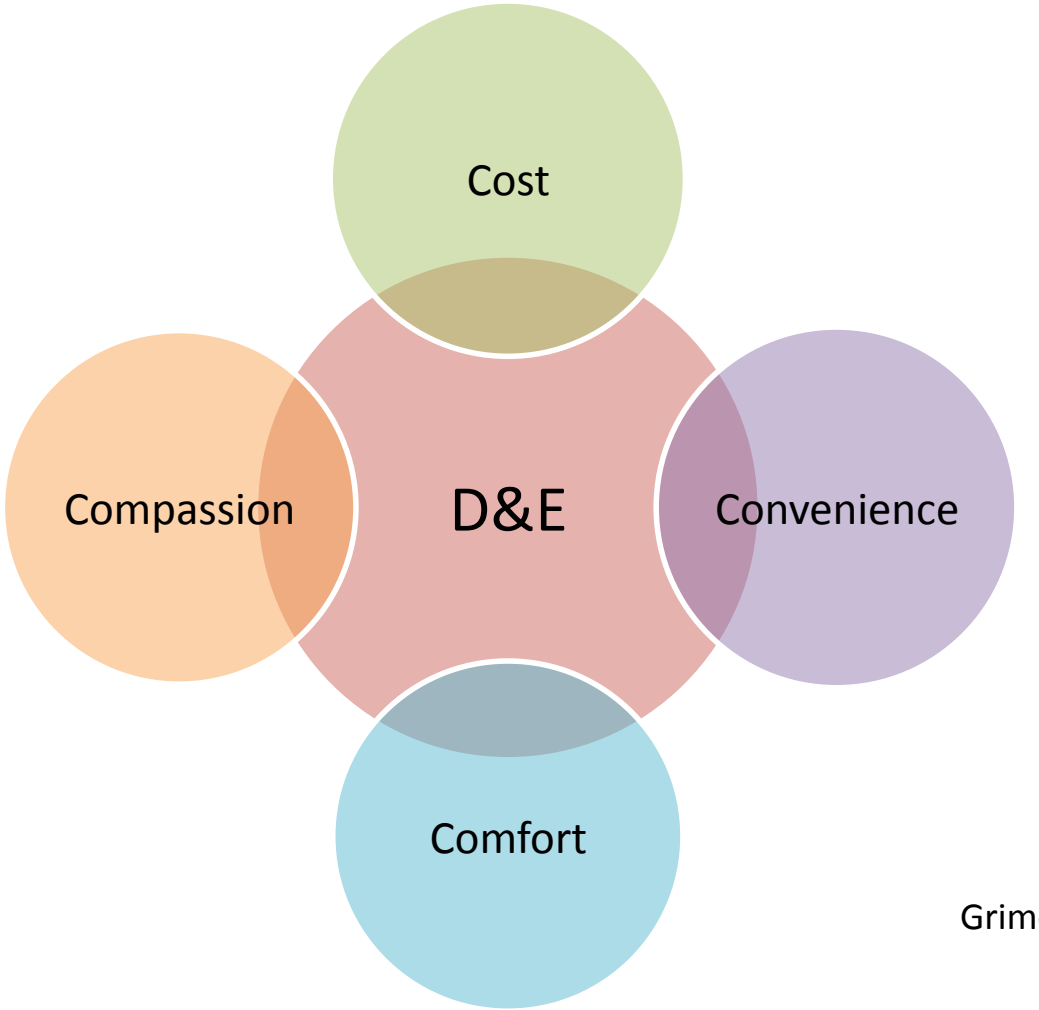
Outcomes

- 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%)

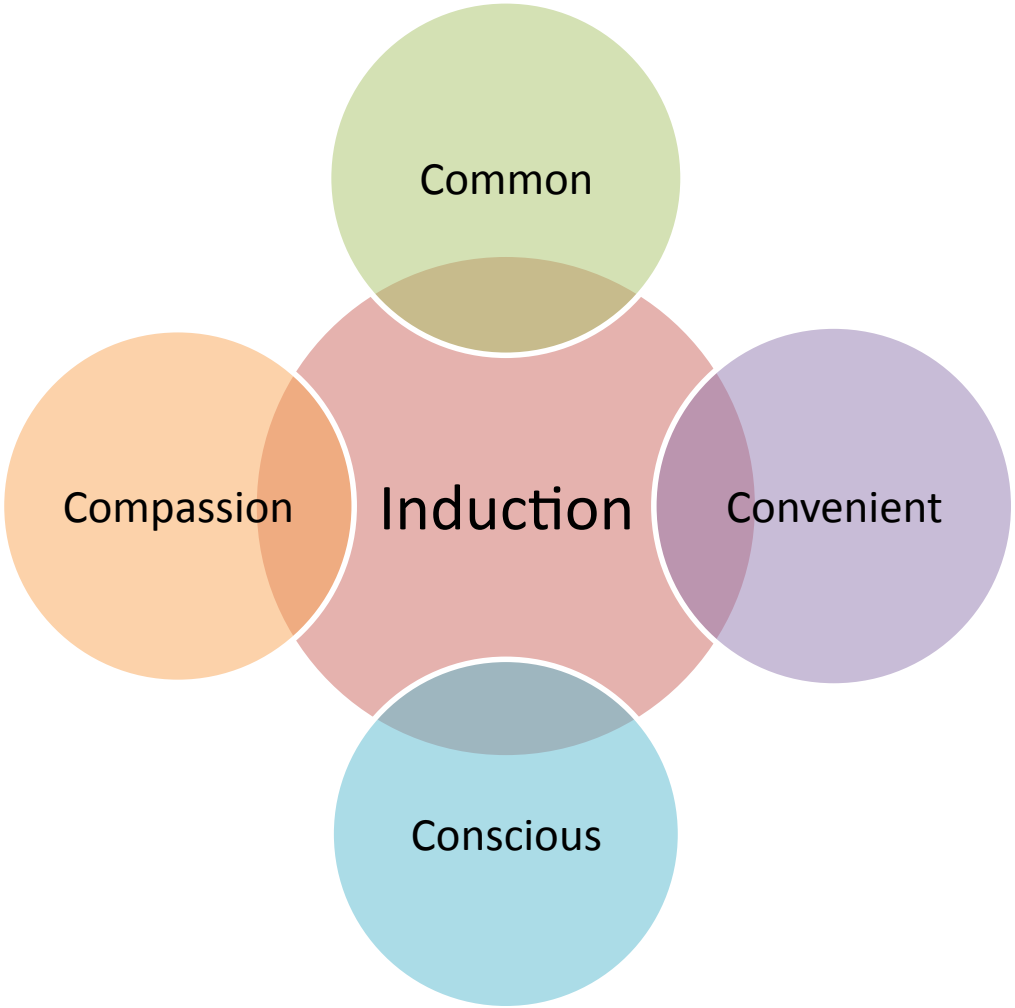
Kelly *BJOG,* 2010; Grimes DA *BJOG* 2004

The four c's – D&E



Grimes *RHM* 2008

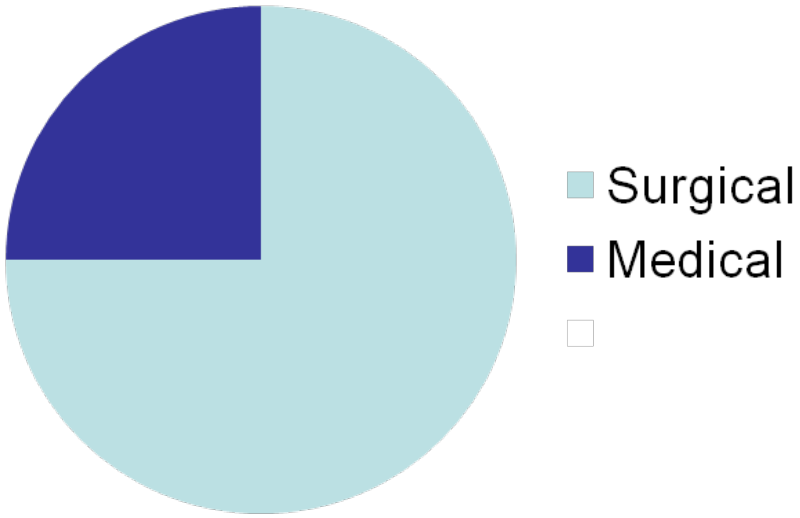
The four c's – medical induction

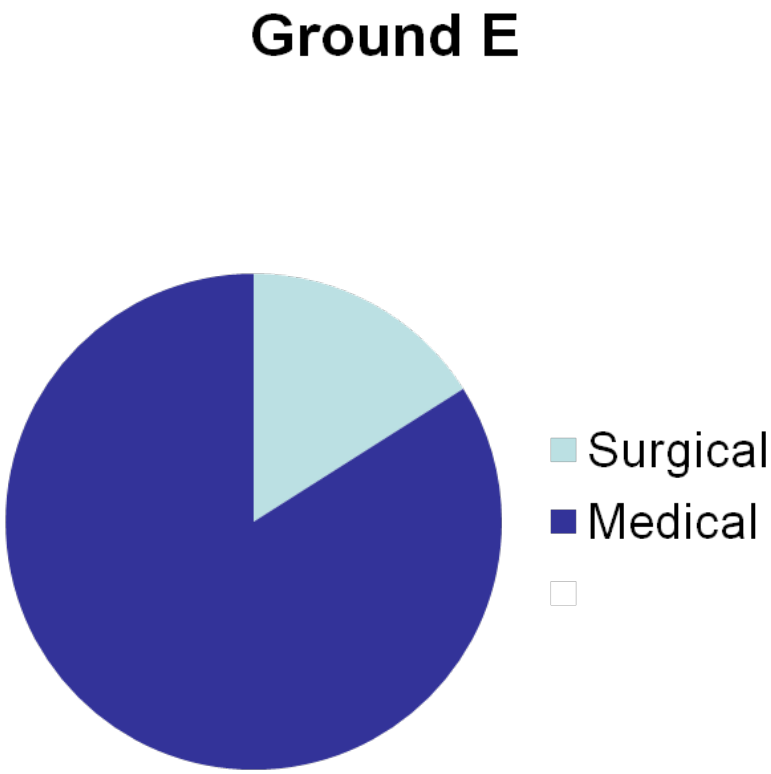


International guidance recommends choice of method based on similar risk profile and recognition of differences in process and preferences

Woman-centred care

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





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

Bernick *AJOG*. 1998; Schulman *Obstet Gynecol*. 1990; Klatt *Am J Clin Pathol.* 1995. Sun CC, *Pediatr Dev* Pathol. 1999; Lal *Prenat Diag* 2014

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.

Bryant *Obstet Gynecol* 2011

Facilitating D&E:
a reflection of commitment to choice

Thank you

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