SURGICAL ELECTIVE ABORTION

FLAME LECTURE: 157

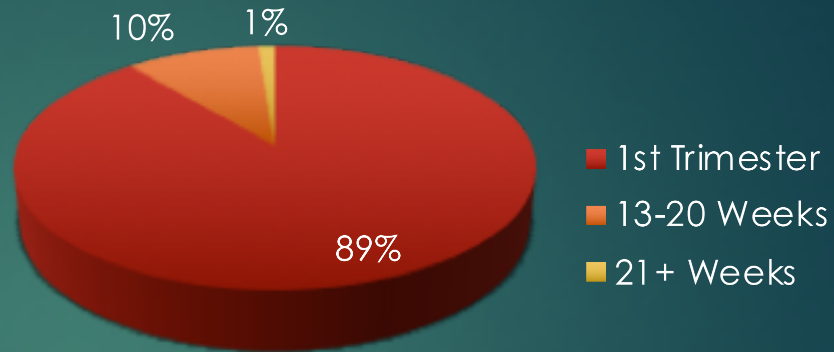
BURNS & CUEVAS 11.4.19

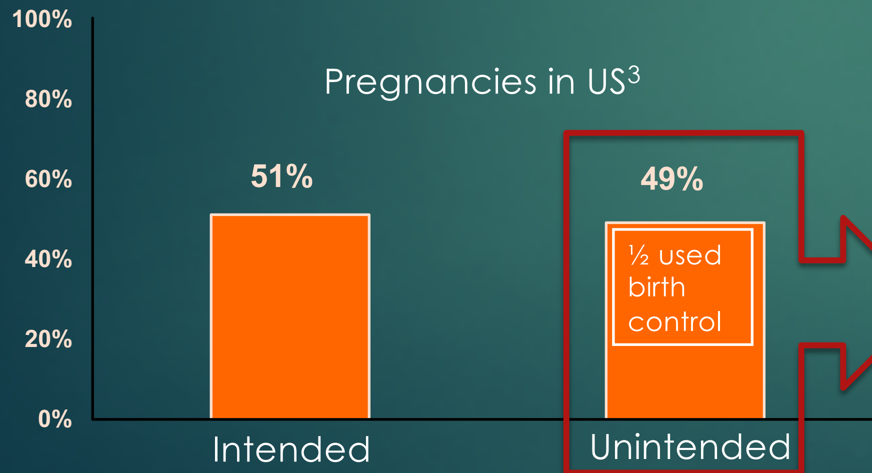
LEARNING OBJECTIVES

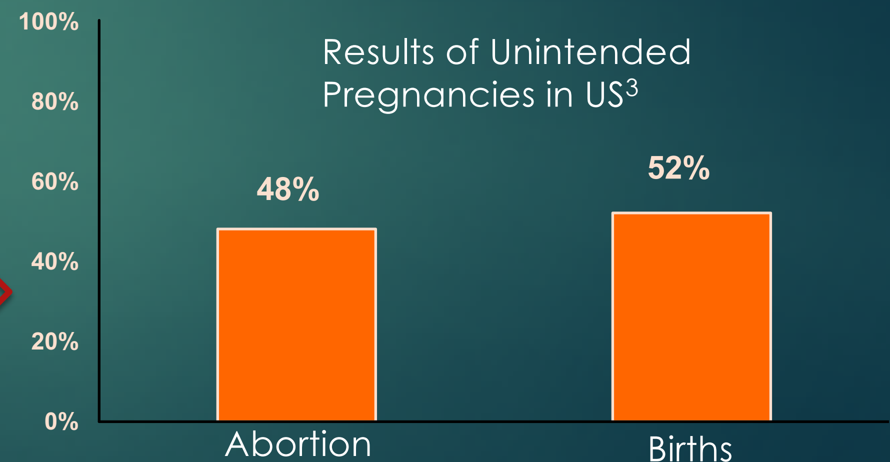
- Explain surgical methods of pregnancy termination
- Describe common outpatient and inpatient gynecologic procedures with their indications and possible complications: pregnancy termination
- Prerequisites:
  - NONE
- See also – for closely related topics
  - FLAME LECTURE 158: Medical Elective Abortion
  - FLAME LECTURE 159: Politics of Elective Abortion

US ABORTION EPIDEMIOLOGY

- 1.21 million abortions per year in US
- By age 45, ~1/3 of all US women will have had an abortion







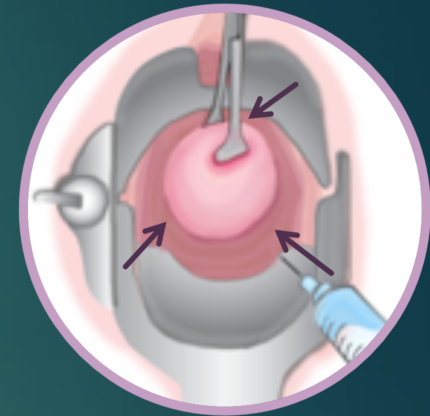
OVERVIEW OF ELECTIVE ABORTION

	1st trimester	2nd trimester
Surgical	**Dilation & curettage (D&C)** –Manual suction –Electric suction	**Dilation and evacuation (D&E)** –Standard D&E –Intact D&E
Medical	**Medication** –Misoprostol + Mifepristone –Misoprostol only	**Labor induction** –Misoprostol +/- Mifepristone

Focus of this Presentation

PREOPERATIVE PREPARATION

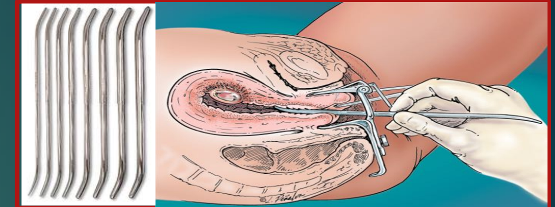
- Initial Evaluation
  - Confirm pregnancy and gestational age with ultrasound
  - Counseling and informed consent
  - Prophylactic antibiotics (risk for infection discussed in Complications)
    - Doxycycline - 100mg PO 1hr before + 200mg PO after case
- Pain Control
  - NSAIDs / Ibuprofen (600-800mg) given an hour before procedure
  - Paracervical Block – Lidocaine injected into both deep and superficial cervical stroma at 12, 4, and 8 o'clock positions
    - Used for both 1st and 2nd trimester procedures
  - Conscious sedation is also recommended for 2nd trimester procedure
- Vasopressin – Sometimes injected paracervically to prevent blood loss during procedure



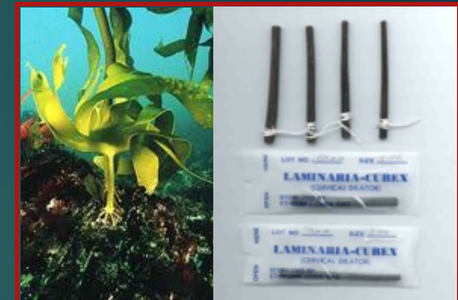
DILATION

- Depending on gestational age, can use manual dilators, osmotic dilators and/or prostaglandins (Misoprostol) to prepare cervix
  - For 1st tri TABs: manual dilators with or without misoprostol are usually sufficient for dilation
  - For 2nd tri TABs: patients usually require several osmotic dilators
- Osmotic dilators are placed in the cervix for 6-48 hrs and they expand radially as they absorb cervical moisture
  - For most 2nd tri TABs, patients have the dilators placed 12-48hrs before the procedure. Thus, these procedures require two office visits over two days and increased pain control
  - Osmotic dilator options are Laminaria (dried compressed seaweed) and Dilapan-S (manufactured osmotic dilator)
    - Generally, # of Lams needed = Gestational Age – 10
    - Generally, # of Dilapan-S needed = ¾ (Gestational Age – 10)

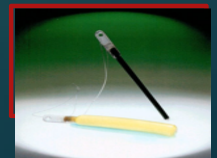
Manual Dilator



Laminaria



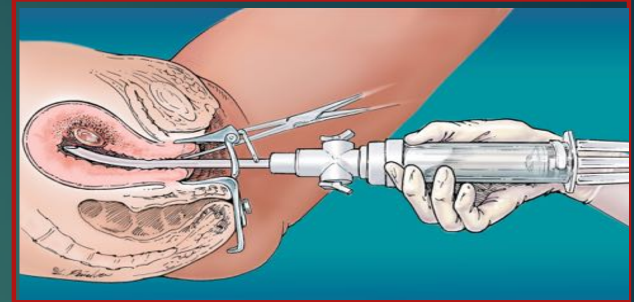
Dilapan-S



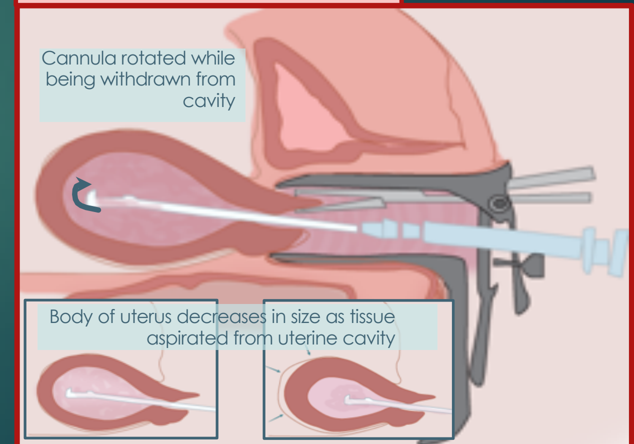
EVACUATION

- First trimester:
  - Cannula is inserted into uterus and uterine contents are evacuated using negative pressure (MVA) or machine-generated suction (EVA). Rotating cannula during procedure helps ensure that all products are removed
  - Sharp curettage can be used at the end to make sure all contents have been evacuated
- Second trimester:
  - Evacuate fetal parts w/ forceps and fluid w/ suction
  - Ultrasound guidance can be used to better visualize the procedure and location of fetal parts
- Following completion of procedure, the clinician examines the evacuated products
  - For all pregnancy terminations, placental villi must be visualized to confirm completion
  - For pregnancies >12wks should also visualize all four limbs, calvaria and thorax

Manual Vacuum Aspirator



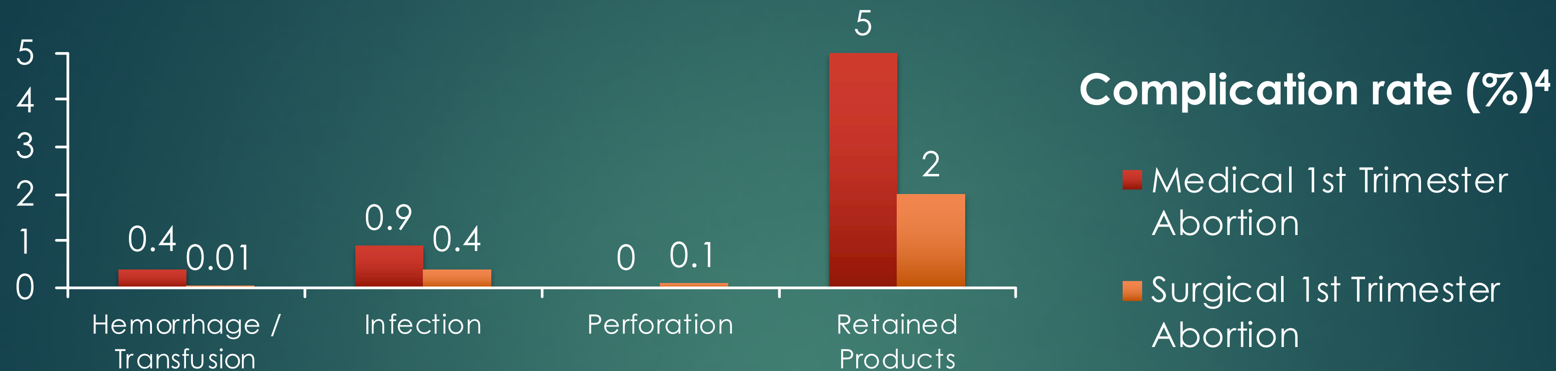
Evacuation of uterus



SPECIAL CONSIDERATIONS

Special Conditions & Considerations for Surgical Elective Abortions	
Uterine Anomaly (septa, bicornuate, etc)	Augment protocol w/ ultrasound guidance
Low Lying Placenta / Placenta Previa	No protocol change
Placenta Accreta	Procedure should be performed in hospital center (access to blood products, anesthesia, hysterectomy if necessary)
Prior uterine scar	Greater risk for uterine rupture so surgical procedure may be safer than medical abortion/misoprostol
Multi-fetal gestation	No protocol change
Chorioamnionitis	Prolonged used of osmotic dilators can increase risk for chorioamnionitis. Should evacuate uterus immediately. If have persistent fever then treat with antibiotics as well. Inserting dilators to facilitate evacuation after chorio onset will not worsen condition, but increase risk of perforation

COMPLICATIONS & ADVERSE EFFECTS



- **Retained products of conception** 1-2%
- **Cervical Laceration** 3%
    - Avoided w/ proper cervical dilation techniques
    - Treated w/ suture, ferric subsulfate, balloon tamponade, or local vasopressin
- **Uterine Perforation** <1%
    - Risk greater in: higher gestational age, multiparity, cervical/uterine abnormalities
    - Can lead to hemorrhage and bladder or bowel damage
- **Infection** <1% (w/ antibiotics), ~4% (w/o antibiotics)
- **Hemorrhage**
- **DOES NOT CAUSE:** increased complication for future pregnancy, infertility, breast cancer, post-abortion mental health problems

OVERVIEW OF TAB RISKS & BENEFITS

First Trimester **Surgical** Abortion

Pros:

- High success rate (99%)
- Available through entire 1st trimester
- Usually minimal blood loss
- Allows sedation if desired
- Complete in predictable period of time
- Usually doesn't require follow-up

Cons:

- Invasive procedure
- Risk for perforation

Second Trimester **Surgical** Abortion

Pros:

- High success rate (99%)
- Available through entire 2nd trimester
- Less likelihood of retained products
- Outpatient
- Minimal patient involvement in procedure

Cons:

- Invasive procedure, multiple days/visits
- Risk for perforation, higher likelihood of blood loss

First Trimester **Medical** Abortion

Pros:

- Avoids invasive procedure
- Avoids anesthesia
- Available during early pregnancy
- High success rate (95%)

Cons:

- Higher risk for blood loss
- Requires follow-up visit
- More active patient participation required
- Takes days to weeks to complete
- Only available up to 10 weeks pregnancy

Second Trimester **Medical** (Induction) Abortion

Pros:

- High success rate
- Available beyond 2nd trimester (in certain states)
- Shorter procedure (can be single day, 6-11hrs)
- Patients have opportunity to have contact with fetus if they so desire (i.e. saying goodbye to planned pregnancy w/ fetal anomaly)

Cons:

- Inpatient (and often in L&D)
- Higher chance of retained products, complications
- More active patient involvement in procedure
- More expensive

IMPORTANT LINS & REFERENCES

1. PRACTICE BULLETIN 135 – Second-Trimester Abortion
2. Guttmacher Institute
3. Finer *Contraception* 2011
4. NAF Management of unintended and abnormal pregnancy 2010