Objectives

- Be aware of different agents available that have been used to end pregnancy
- Know the potential toxicity of agents used to end pregnancy
- Be able to initiate treatment resulting from toxic exposure to abortifaciens.
Disclosures

- Financial: No financial disclosures
- FDA: I will mention medications that are used in an off label fashion. I will also discuss non-FDA approved herbals

Disclaimer

- This will not be a “How To” lecture. Any mention of agents or regimens is so that you will be familiar with what people may do.
What are we looking at?

- Antiandrogens
- Uterine Contractility agents
- CV agents
- Other systemic agents
- Local toxicity/injury
- What is available

Mifepristone – FDA approved

- Progesterone antagonist
- Follow up 24-48h misoprostol
- REMS program
- Available by mail
Toxicity

- Minimal in FDA approved regimen
- CYP3A4 inhibitor
- Infection
- Excessive bleeding

Other antiandrogens

- Tamoxifen
  - One suggestion online
  - Excess bleeding
- Aromatase inhibitors
  - Minimal toxicity

- None of these show much effect
Misoprostol Alone

- Relatively few ADE 1\textsuperscript{st} trimester
  - Exclude uterine surgery
- Case reports 2\textsuperscript{nd} trimester
  - Weak association with LTCS
  - ? Classical/CS
  - Unknown doses

What are the likely meds?

Meds/substances that are available…
…also any thing “bad” in pregnancy
Acetaminophen

- Not much new here
- IV NAC
  - Avoid 1st pass hepatic clearance

How many ibuprofens can cause a miscarriage?

Ad by Pitney Bowes

We can’t predict what’s ahead, but what are some smart ways to save money for larger businesses?
The first thing most businesses look at when evaluating saving money is their expenses. Expenses mainly come from outside and inside resources. For instance, your sending and rece.(Continue reading)
NSIADs

• NSAIDs
  – Premature DA closure
  – AGMA

Aspirin

• Aspirin
  – Oil of wintergreen
  – Bismuth subsalicylate
  – Neem
• Usual care
• Prevent acidosis
Iron

- Vomiting
- Acidemia
- Hepatitis
Methotrexate

• Ectopic
  – 75 mg/m² or 50 mg/m²
• Exclusions
  – Mass > 3.5 cm
  – Cardiac activity
  – HCG level (?)

Methotrexate

• Oral is not IM/IV
  – Bioavailability issue
  – Nausea and vomit
• Unlikely to reach w/ single oral dose
• Multidose…
• Bone Marrow suppression
**Methotrexate**

- Leucovorin rescue
- Mg:mg equivalent
- Continue until MTX < 0.1 microM
- Unknown role for glucarpidase
- High risk of fetal deformity

**Isotretinoin**

- 11-22% spontaneous abortion rate
- Unknown for deliberate
High Dose Vit C

- Often mentioned with alcohol
- Acidemia
- Hemolysis (associated with IV use)

Other meds

- Colchicine
- Antimetabolites
Natural Products/Supplements

Ubiquitous

• Regional
• Untested (mostly)
• Significant toxicity potential
OMG! There are so many…

- Every region has a list
- Folklore, no evidence
- Lots of common/local names
- Many available for purchase online

Abortion is not a modern invention. For millennia women have used a variety of plants to prevent or terminate pregnancy.

Many of the herbs included have mythic reputations as aphrodisiacs because of their associations with freedom and sexuality, stemming from their use in ancient ergotastic cultures.

As technological culture puts the power over our lives in the hands of a small number of bi-tech experts, women have stopped learning how to control their own fertility.

Herbal Abortion gathers some of the long-known knowledge of herbal abortion and puts it into a straightforward and practical booklet.

Most of the substances mentioned are readily available, and all of them are known to be effective.

Herbal Abortion covers not only herbs but also other things such as home pregnancy testing kits that put control back into the hands of the individual woman.

Herbal Abortion empowers women and gives them a chance to learn how to affect their own reproductive systems.

Herbal Abortion is not a panacea of new and radical ideas. It is simply the perpetuation of age-old knowledge that has been systematically suppressed by those—mostly medical witch-hunters and clergy to modern day doctors and politicians—who would usurp the power of a woman’s control over her own body.

Just because herbal abortion uses herbs does not mean it will be gentle or easy. There are certainly risks with any medical treatment. Natural does not equal safe.

Having read this, a woman may well choose not to use a herbal method of abortion.

But whatever she chooses, she will be making a more informed choice from a wider range of options, and she will better understand the workings of her own body.

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Two pounds
Cohash

- Black
- Blue
- w/w/o Vitamin C

Cohash

- *Actaea racemose*
- Estrogen like effect
Cohash

- Liver injury(?)
  - Mislabeled product?
  - Estrogen – cholestatic hepatitis

Don Quoi

- *Angelica sinensis*
- Estrogen like effects
- drug-drug interactions
- Little data, but very available
Parsley

- Minimally Toxic
- Extract/Unlike to eat plant
- Photodermatitis
  - Furanocoumarins - Psoralen

Osha root

- *Ligusticum porter*
- Similar to parsley
- “Liver and Kidney damage if taken in excess for a long period of time”
But…

• Similar in appearance to Poison Hemlock
Conium Maculatum

- *Conium maculatum*
- Post synaptic nicotinic agonist
  - Similar to succinylcholine
- Airway control
- Supportive

Pennyroyal oil

- *Hedeoma oblongifolia*
- Pulegone
- Hepatotoxic
- Centrilobular necrosis
  - Acetaminophen like
- Multiple case reports
Pennyroyal Oil

- n-Acetylcysteine
- Fomepizole
- Liver transplant

Mugwort

- Artemisia ludoviciana
- Other Artemisia sub supps
- Thujone and Camphor
- GABA antagonist
- Renal injury
- Seizures
Tansy

- *Tanacetum Vulgare*
- Interesting history
- Very high thujone

- *Jacobaea vulgaris* – Tansy Ragweed
  - Hepatitis (2-3 weeks)

Rue

- *Ruta graueolens*
- Hippocrates
- K channel blocker (?) – QT changes
- Vomitting
(Immortal) Antelope Horn

- *Asclepias Asperula*
- Cardiac Glycosides

Cyanogenic Glycosides

- *Manihot esculenta* – Cassava/yuca
  - UMN disease
- *A. cissampelooides* – *(African) Passionflower*
- *Daucus Carota* – Wild Carrot (USA – Queen Anne’s Lace)
- Persistent lactic acidosis
Vaginal Applications

- Aconite
- Cardiac Glycosides
- Intracervical *Combretum indicum*
- *Albizia ferruginea* – Musase “abortion leaves”
  - Vaginal ulceration/bleeding
- *Abrus Precatorius*

Truly Frightening…

- *Ricinus communis*
- Snakebite
Questions?