Family PACT Webinar
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Preventing and Managing IUD Complications

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Disclosures: In the past 12 months,

- I have been a litigation consultant for Bayer Healthcare
- Trained with Cebela Pharmaceuticals to become a proctor for Phase III trials of a copper IUD

Most IUD insertions and removals are easy

The tough ones are tough!

Difficult IUD Placements

Kristin 29 year old G_0
Seen for a LNg IUD Placement

- On DMPA for the last 3 years
- LEEP for CIN 3 at age 25; negative cytology since
- Tenaculum applied, but the clinician is unable to pass a metal sound

What would you recommend?

Tenaculum & Sound Technique

1. Change the amount of traction
2. Apply traction in different direction
3. Gently hold the sound at the internal os and then wait --to allow the os to yield
4. Change the curvature of the sound (if metal)
5. Apply light pressure at various angles 360^{o} and positions with the sound looking for an opening
   - Approach more anteriorly or posteriorly
6. Use os finder device

Os Finder Device

Cervical Os Finders (Disposable Box/25)
Cervical Os Finder Set (Reusable Set of 3)

Still Unable to Pass Through the Internal Os

7. Use a thinner sound (endometrial sampler)
8. Reposition the tenaculum
9. Try a shorter wider speculum (Moore-Graves)
10. Dilate with small metal or plastic dilator
11. If unsuccessful, return after misoprostol 200 mg per vagina 10 hrs and 4 hrs prior to placement
12. Place paracervical *or* intracervical block at any point

Passed Through with Sound
…but not the Inserter!

1. Choke up on the inserter handle
2. Sterile lubricant on tip
3. Leave the (small) sound in the canal and come alongside the sound with the inserter

Betsy 19 year old G_0
"I Faint Easily"

- History of feeling light-headed at the sight of blood
- Recently had a fainting spell after HPV immunization
- She told her PCP about this problem…heart auscultation and an ECG were normal

Betsy 19 year old G_0

- While having her LNg IUD placed, Betsy says

  "Is this going to take much longer? I really need to go to the bathroom"

- What's going on here??

Vasovagal Response, Episode Or Attack
AKA: Non-cardiogenic Syncope

- Mechanism
  - Starts with peripheral vasodilation
  - Bradycardia + drop in blood pressure
- More likely with
  - Pain with cervical manipulation
  - Previous episodes of vaso-vagal fainting
  - Dehydration or NPO

Grubb BP N Engl J Med 2005

Presyncopal Symptoms

- Weakness/light-headedness
- Visual blurring/tunnel vision
- Nausea
- Feeling warm or cold
- Sudden need to go to the bathroom
- Tinnitus

Grubb BP N Engl J Med 2005

Presyncopal Signs

- Facial pallor (distinct green hue)
- Yawning
- Pupillary dilatation
- Nervousness
- Diaphoresis
- Slurred or confused speech

Grubb BP N Engl J Med 2005

Vasovagal Prevention

- Good hydration (electrolyte/ sports drink)
- Eat before placement
- Prophylactically contract muscles if known history

Grubb BP N Engl J Med 2005

How to Abort a Vasovagal

- Isometric contractions of the extremities
- Intense gripping of the arm, hand, leg and foot muscles
- No need to bring the legs together or change position– just tense the muscles
- These contractions push blood back into the center of the body
- ….and abort the reflex

Management of Complications

IUD Complications

	Absolute Risk	Comment
Perforation	1/1,000	Mostly benign
Expulsion	1-6/100	Most are self-recognized
Unsuccessful placement	9/ 100	6% when different device is used after unsuccessful attempt
Pregnancy	<1/HWY	Minimal impact if removed early in pregnancy
PID	1-2/TWY	Same as gen'l population

HWY: per 100 women per year
TWY: per 1,000 women per year

Symptoms of Possible Complications

Symptom	Possible Explanation
Severe bleeding or abdominal cramping 3–5 days after insertion	Perforation, infection
Irregular bleeding and/or pain every cycle	Dislocation or perforation
Fever, chills, unusual vaginal discharge	Infection

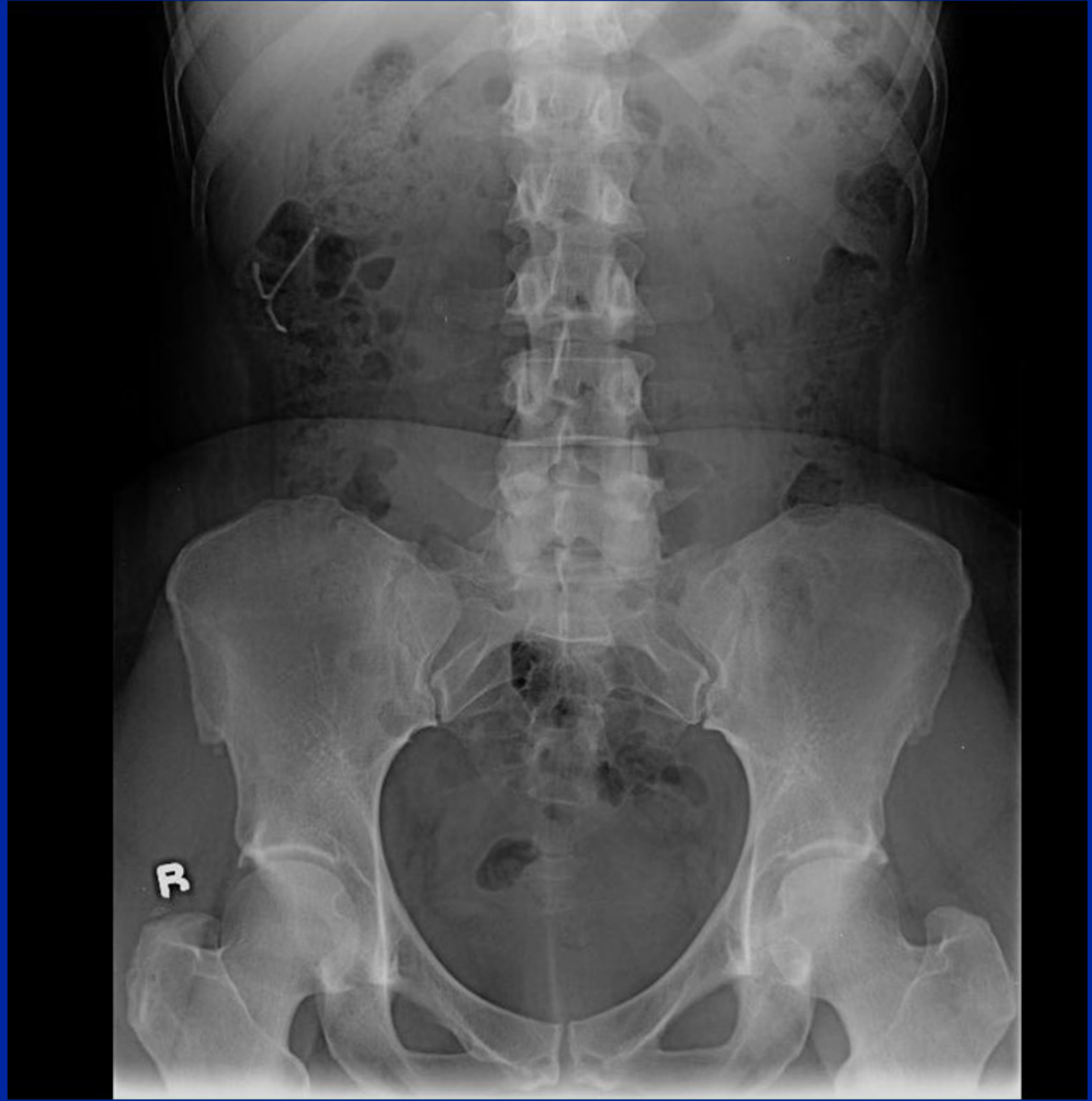
more…

Symptoms of Possible Complications

Symptom	Possible Explanation
Pain during intercourse	Infection, perforation, partial expulsion
Missed period, other signs of pregnancy, expulsion	Pregnancy (uterine or ectopic)
Shorter, longer, or missing threads	Partial or complete expulsion, perforation

Jennifer 39 year old G_2 P_2
"What Was That Pain?"

- 6 wk post-partum visit (NSVD)…wants copper IUD
- Lactating, no longer bleeding
- Exam: 8-9 week size uterus; firm, non-tender
- During sounding, moderate resistance at the internal os…then sounded to 14 cm.
- She complained of pain only during the initial part of the sounding procedure
- What would you do at this point?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Uterine Perforation

- More likely to occur in relation to
  - Posterior uterine position
  - Post-partum placement, esp. in lactating women
  - Skill/experience of provider
- Typical location is midline at uterine fundus…if so, perforation often is asymptomatic, benign
- Suspect if sounding is much deeper than expected or if ↑ resistance followed by none at fundus
- Can be confirmed by real-time office ultrasound

Management of Uterine Perforation

- If *before* deployment of IUD, stop procedure
- If *during* placement of IUD, remove IUD
- Monitor for 30 min for excessive bleeding, pain
- Provide alternative method of contraception
- Can place another device after next menses

Prevention of Uterine Perforation

- Always assess uterine position before insertion
- Gentle tenaculum traction to straighten uterine axis
- Careful hand positioning with sound and IUD inserter
- Consider using a plastic sound
- Never use IUD inserter to sound
  - Open package only after sounding is completed
- Don’t use the stabilizing rod as a plunger w/copper IUD
- Place cervical block and dilate cervix if resistance

Prevention of Uterine Perforation

- Move slowly and intentionally
  - Avoid momentum; moving quickly increases momentum
- Once you have passed through the internal os—*STOP and pause for a second*
  - Then intentionally proceed to the fundus in a controlled fashion

Prevention of Perforation

You will feel resistance when the uterine sound touches the fundus

- **This "fundal feel," or resistance should be a signal to STOP advancing the sound**
- **Never push beyond fundal resistance even if the flange is not yet at the external os**

Rosa 50 year old G_3 P_3
"I Can't Feel The String"

- IUD inserted 8 years ago
- Remembers had a T shape, but not sure which type
- Hasn't been able to feel the string for the past 2 months, but before that checked irregularly
- String is not present at the external cervical os

Missing IUD String…Possibilities

1. IUD in-situ
   - String coiled in canal or endometrial cavity
   - String short, broken, or severed
2. Unnoticed expulsion
3. Intrauterine pregnancy

Missing String…Possibilities

Malposition of the IUD, following perforation

4. **Embedment** into the myometrium
5. **Translocation** into the abdomen or pelvis

- The perforation is not the problem; the abnormal position of the IUD is!

Missing String: In situ Placement

- Desires retention
  - Leave in place for remainder of IUD lifespan
  - Option: annual pelvic ultrasound *in lieu* of string check
- Desires removal
  - Attempt extraction as office procedure

Missing String: Expulsion

- Occurs in 2-10% IUD insertions within first year
- Risk of expulsion related to
  - Provider's skill at fundal placement
  - Age, parity, uterine configuration
  - Time since insertion (↑ within 6 mos.)
  - Timing of insertion (menses, postpartum, post-abortion)

Missing String: Expulsion

- Unnoticed expulsion may present with pregnancy
- Partial expulsion may present with
  - Pelvic pain, cramps, intermenstrual bleeding
  - IUD string longer than previously

Missing String: Pregnancy With IUD

- Determine site of pregnancy (IUP or ectopic)
- If termination planned, await TAB to avoid triggering spontaneous abortion (SAB)
- If continuing IUP and strings are not visible, do not attempt removal
  - Increase surveillance for SAB, pre-term birth
  - No greater risk of birth defects

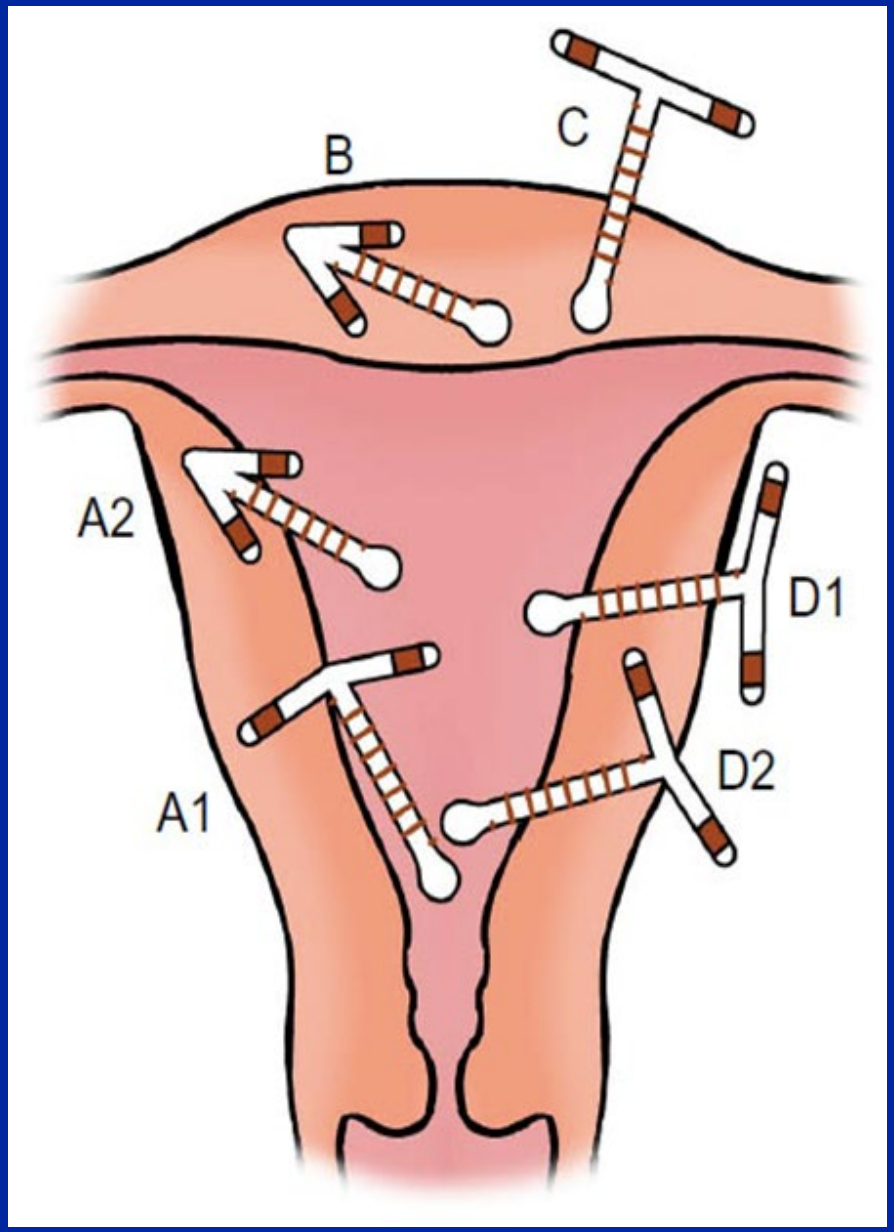
Missing String: Perforation

- **Translocation**
  - **Since copper IUD may cause more adhesions, must extract promptly via laparoscopy**
  - **LNG-IUS is less reactive, but most experts recommend laparoscopic removal**

Missing String: Perforation Complication

- **Embedment**
  - Diagnosed at failed attempt at extraction or imaging
  - Remove when diagnosed, as embedment may progress to translocation
  - Advanced imaging (3-D ultrasound or pelvic CT) is critical, as it is used to direct treatment to hysteroscopy, laparoscopy, or laparotomy

Why Do CT or 3-D Ultrasound?

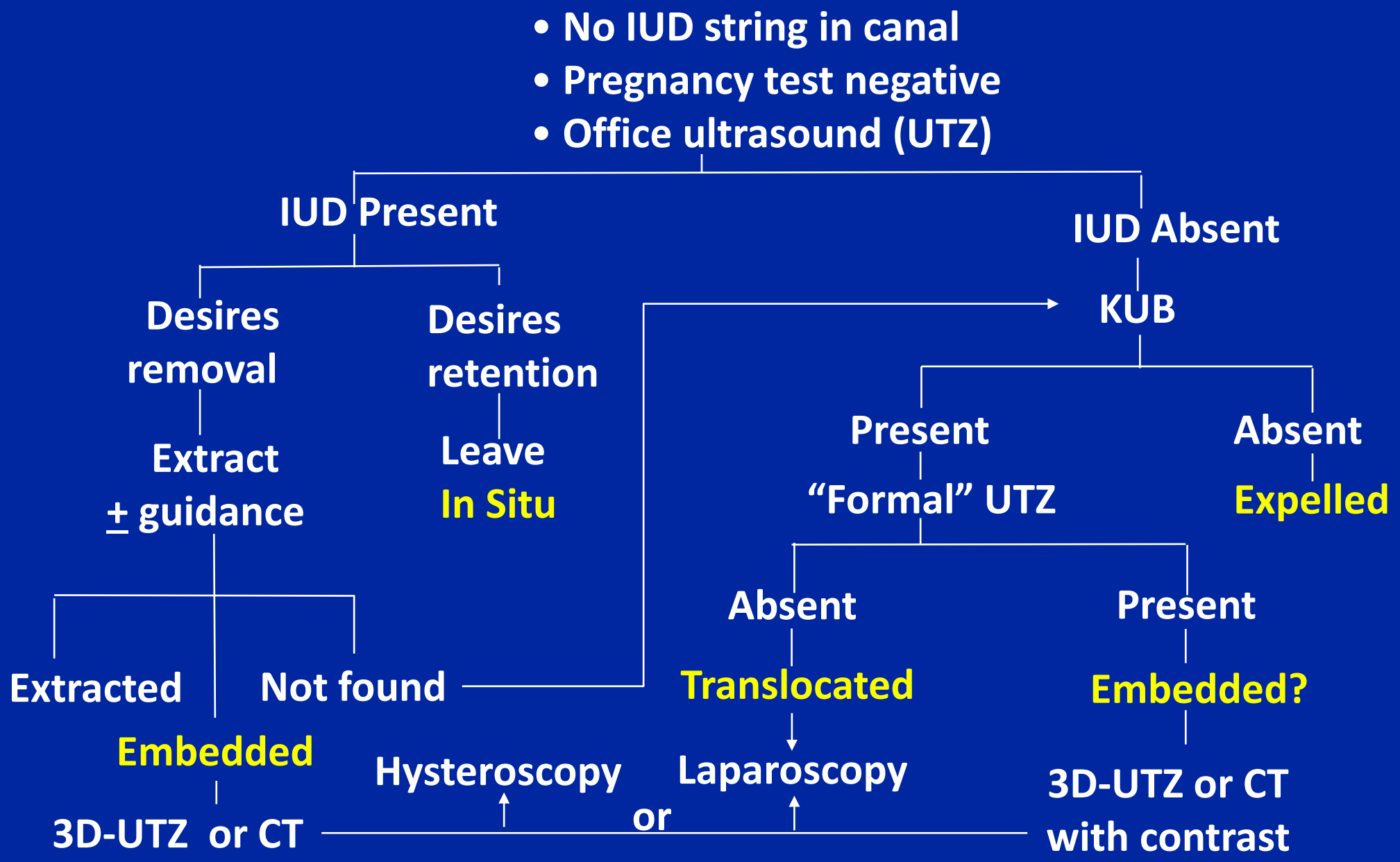


A: Hysteroscopy
B: Laparotomy
C: Laparoscopy
D_1: Laparoscopy
D_2: Hysteroscopy

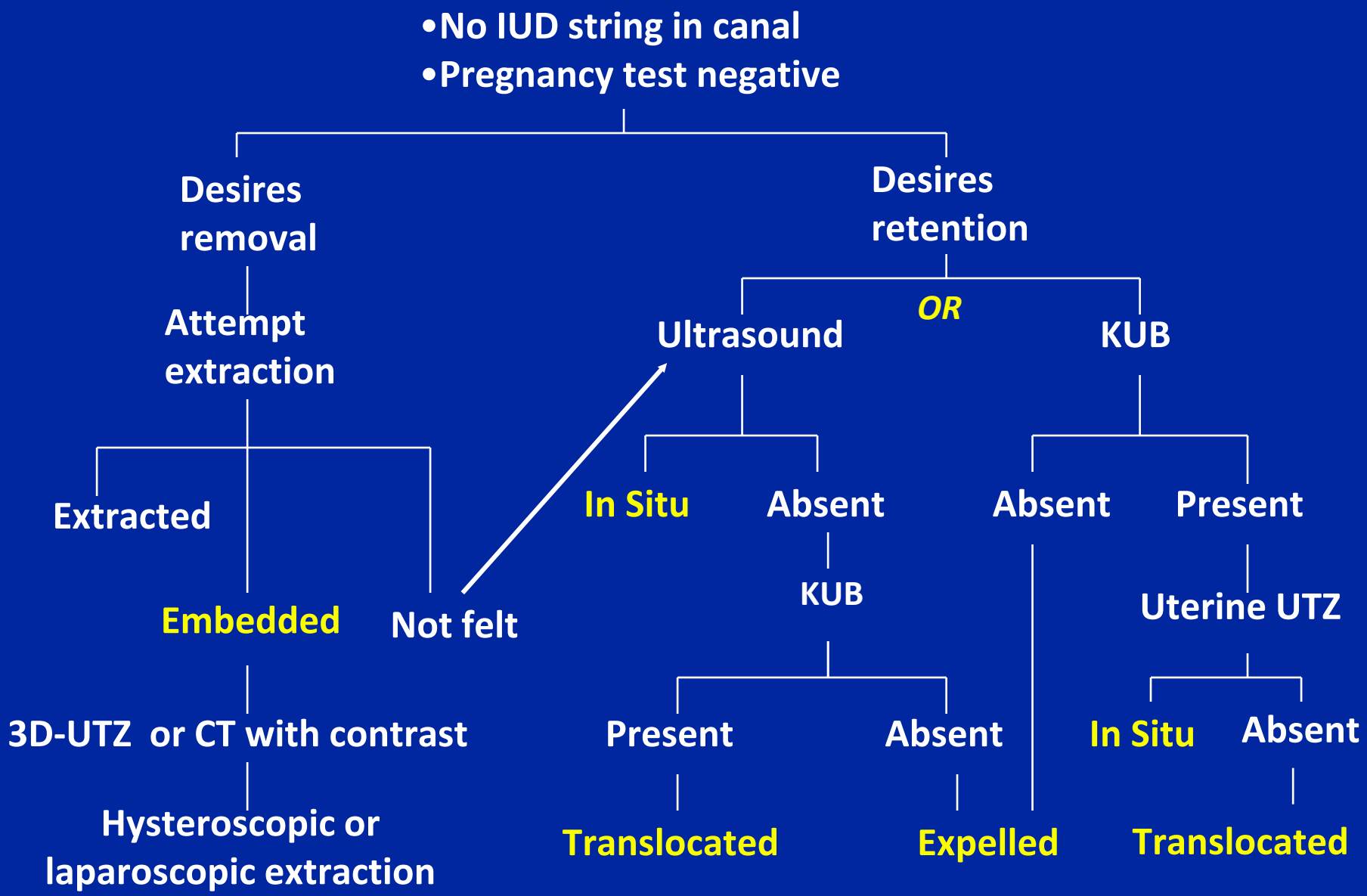
Missing IUD String: Initial Management

1. Sweep string from canal with brush sampler
2. Pregnant? → perform office UPT
   - Positive: locate and date pregnancy
   - Negative: go to #3
3. Office ultrasound, if available
   - No IUD in situ: order KUB
   - IUD in situ: go to #4
4. Retention desired?
   - Yes: may continue use
   - No: attempt extraction

Missing IUD String: Office Ultrasound



Missing String: No Office Ultrasound

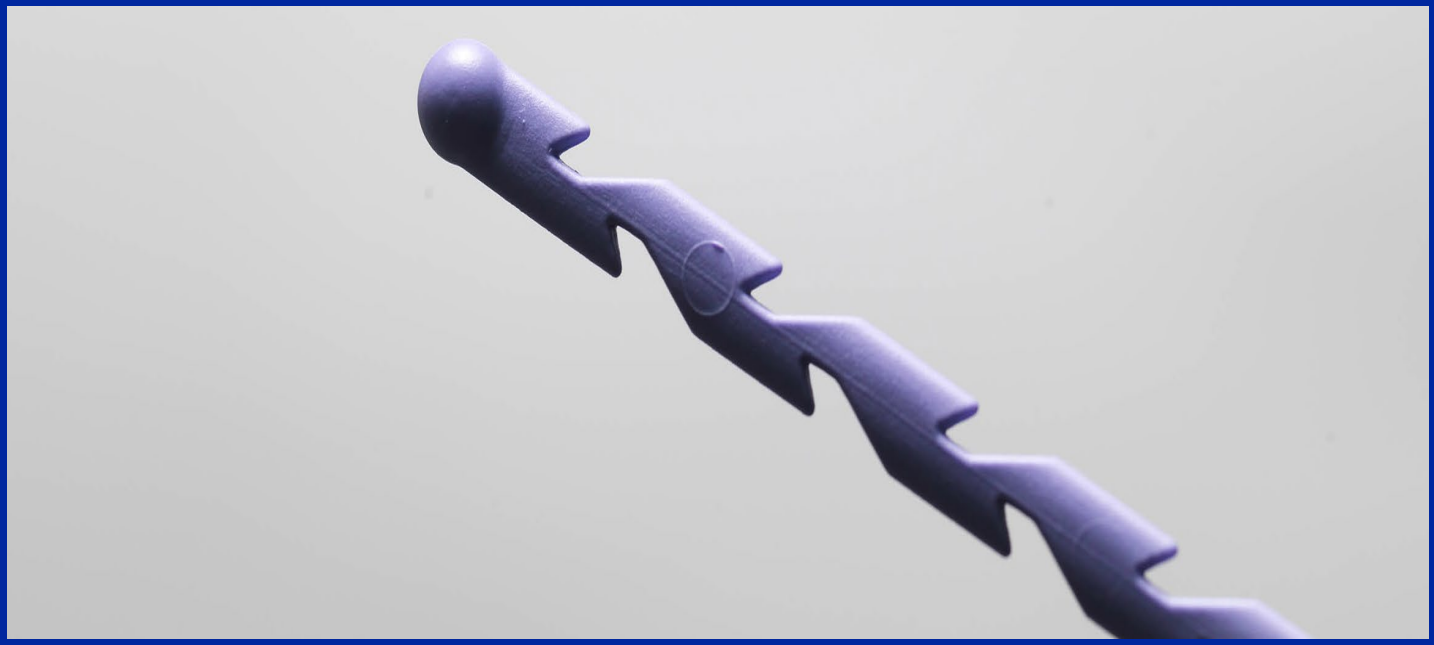


Missing String: Desires Removal

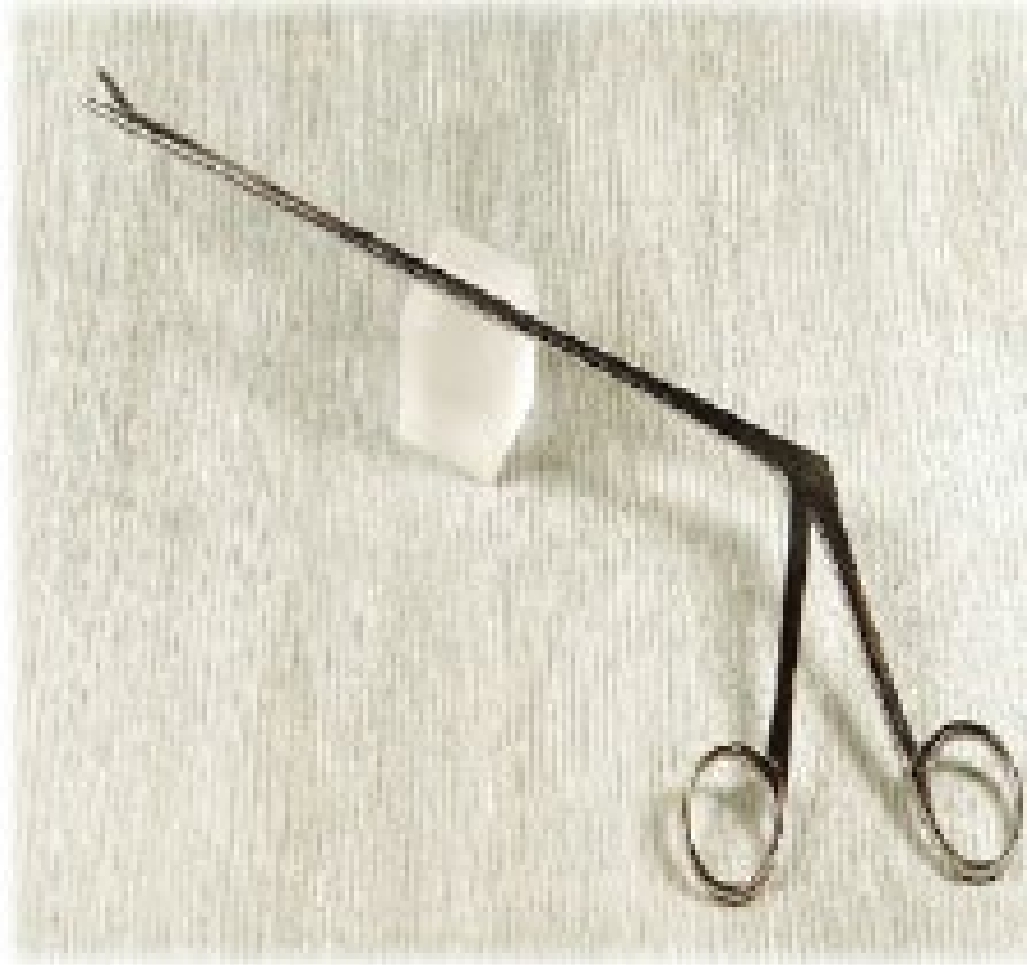
Extraction of IUD in-situ

1. Consent for uterine instrumentation procedure
2. Bimanual exam
3. Probe for strings in cervical canal
4. Apply tenaculum
5. Administer cervical block (optional, but recommended)
6. Choose extraction device
   - Emmett Thread Retriever
   - Patterson alligator forceps
   - Ring IUD: crochet hook or 3-5 mm suction curette

Emmett Thread Retriever



Thread Retriever



Alligator forceps

Fulcrum 1 cm from the tip of the device

Opened and closed completely within the uterine cavity

No cervical dilation necessary

Prabhakaran S, Chuang A, *Contraception* 2011.

Missing String: Desires Removal

Extraction of IUD in-situ

7. Intrauterine exploration for a T-shaped IUD
   - Real-time ultrasound guidance may help, if available
   - Gently open/ close/quarter turn forceps at progressive depths until “purchase” of stem or arm
8. Maneuver hook along anterior, then posterior, uterine wall from fundus to canal
9. If embedment suspected, consider evaluation with 3-D ultrasound or pelvic CT with contrast
   - Extract via operative hysteroscopy or laparoscopy

Missing String: Desires Removal

Additional measures, as indicated

- **Pain management**
  - **Cervical block + oral NSAIDs for pain**
  - **Conscious sedation**
- **Cervical dilation**
  - **Osmotic dilator**
  - **Rigid dilators**
  - **Misoprostol *may* facilitate IUD extraction**

IUD Removal in Menopausal Women

- Strings seen: remove
- No strings visible…weigh risks
  - Hazards of continuation (post-menopausal bleeding, ? pelvic actinomycosis)
  - Hazards of removal (pain, perforation)
- Tail-less IUD (e.g., Chinese stainless steel coil ring) should not be removed unless she requests it

PID in an IUD User

- Provide comprehensive management for STDs, including counseling about condom use
- Treat PID according to the CDC STD Treatment Guidelines
- The IUD does not need to be removed immediately if the woman needs ongoing contraception

PID in an IUD User

- Reassess in 48–72 hours
  - If no improvement, continue antibiotics and consider removal of the IUD
- If the woman wants to discontinue use, remove the IUD after antibiotics have been started to avoid the potential risk for bacterial spread resulting from the removal procedure
- If the IUD is removed, consider ECPs if appropriate

STD Treatment Guidelines (p82)

- If IUD user is diagnosed with PID, IUD removal not needed
- Treat c/w PID recommendations with close follow-up
- If no clinical improvement in 48–72 hours of initiating treatment, consider removing the IUD
- Treatment outcomes did not differ between women with PID who retained the IUD and those with IUD removal

Actinomyces-Like Organisms (ALO)

- *Actinomyces israelii* has characteristics of bacteria and fungus; part of GI flora
- May colonize frame of the IUC; not dangerous
- Very small % of women with IUC + actinomyces will develop *pelvic actinomycosis*
  - Presentation is similar to severe PID
- Women with ALO on Pap smear
  - Should be examined to exclude PID
  - If none, don't treat actinomyces or remove IUC

Genital Tract Infections

- If cervical or vaginal infection diagnosed
  - IUC removal not necessary
  - Treat infection
  - Counsel re: prevention of STD transmission

Thank you!

Questions??