IUD Insertion and Removal

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Disclosure
Merck:
• Gardasil; Advisory board
• Gardasil, NuvaRing, Implanon, Nexplanon; Speaker/trainer
Teva
• ParaGard; Advisory board, speaker/trainer

Objectives
• Demonstrate the hand skills necessary for placement of the copper IUC and the two levonorgestrel IUCs
• List three major complications that are a risk with IUC placement and how to manage them

Take Home the “IUCs”
• Keep one in your lab coat
• One in each room
• Give them to your patient to hold, feel and play with while discussing the method
• Show her how to feel the threads with it

Terminology
Old name
• IUD: Intrauterine Device
New name
• IUC: Intrauterine Contraception
  – Applied to Cu-T380 (ParaGard®)
  – Generic term for all three
• IUS: Intrauterine System
  – Applied to LNG-IUC (Mirena®)
"Skyla is now FDA-approved...
...as a new IUC’’

“LARC”
Long Acting Reversible Contraception
The Case for LARC Methods

- More than 1/3 of all U.S. women will have had an induced abortion by age 45
- 20% of women selecting sterilization at age <30 years later express regret
- Need for effective contraceptive methods that are “forgettable”

Henshaw SF. Fam Plann Perspect 1998
Stanwood NL. Obstet Gynecol 2002

Contraceptive Use During Month of Unintended Pregnancy

43% used contraception
5% consistent method use: method failure
52% did not use contraception

Guttmacher Institute In Brief Series 1 2008

What are LARC Methods?

- Long Acting Reversible Contraception
  - IUCs: LNG-IUC’s, Cu-T380A
  - Implants: Etonogestrel Implant
- Long term continuous protection 24/7/365 protection… for 3-10 years
- Do not require episodic patient initiative for use
  - Not daily
  - Not weekly
  - Not monthly
  - Not even every 12 weeks

Contraception by Age (2008)

Why LARC Methods?

- The most effective methods & among the safest
- They are “forgettable”
- Require just one motivational act
- Superior continuation and highest patient satisfaction rates among methods
- An alternative to surgical sterilization
- The most cost saving methods of contraception
Savings per dollar expenditure by contraceptive method, Family PACT 2003

What’s in a Name?

Better Than “LARC”

- Top tier
- Highly effective, and reversible
- The best methods we have
- What health care providers use
- Safest and most effective...

Tiered Effectiveness

- We don’t need to exhaustively run through each of the methods with each client.
- The goal of contraceptive counseling:
  
  To assist the client in making an informed decision that supports their reproductive goals

Effectiveness and Continuation Rates

<table>
<thead>
<tr>
<th>Method</th>
<th>Perfect Use</th>
<th>Typical Use</th>
<th>Continuation Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Implant (Implanon)</td>
<td>0.05</td>
<td>0.05</td>
<td>84%</td>
</tr>
<tr>
<td>Male sterilization</td>
<td>0.10</td>
<td>0.15</td>
<td>100%</td>
</tr>
<tr>
<td>IUC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• LNG-IUC (Mirena)</td>
<td>0.2</td>
<td>0.2</td>
<td>80%</td>
</tr>
<tr>
<td>• Cu-T 380 (ParaGard)</td>
<td>0.6</td>
<td>0.8</td>
<td>78%</td>
</tr>
<tr>
<td>• Skyla*</td>
<td>0.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female sterilization</td>
<td>0.5</td>
<td>0.5</td>
<td>100%</td>
</tr>
<tr>
<td>DMPA</td>
<td>0.2</td>
<td>6.0</td>
<td>56%</td>
</tr>
<tr>
<td>OCs, Patch, Ring</td>
<td>0.3</td>
<td>9.0</td>
<td>67%</td>
</tr>
</tbody>
</table>

Intrauterine Contraception in the U.S.

<table>
<thead>
<tr>
<th></th>
<th>Copper T-380</th>
<th>LNG-IUC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mechanism</td>
<td>Spermicidal effect of copper</td>
<td>Thickening of cervical mucus</td>
</tr>
<tr>
<td>Duration</td>
<td>Up to 10 years</td>
<td>Up to 5 years</td>
</tr>
<tr>
<td>Efficacy</td>
<td>0.8 failures/hwy</td>
<td>0.2 failures/hwy</td>
</tr>
<tr>
<td>Benefit</td>
<td>No hormones</td>
<td>Less bleeding</td>
</tr>
<tr>
<td>Non-contraceptive use</td>
<td>None</td>
<td>Menorrhagia Menstrual pain</td>
</tr>
</tbody>
</table>

Client Choice of IUC Type

- **Copper T IUC**
  - Don’t want or can’t use hormonal contraception
  - Like having a regular menses

- **LNG IUC’s**
  - Want less menstrual flow
  - Hx dysmenorrhea
  - OK with possible amenorrhea

Timing of placement of Intrauterine Contraception

<table>
<thead>
<tr>
<th>Timing</th>
<th>Pros</th>
<th>Cons</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>With menses</strong></td>
<td>Ensures patient not pregnant</td>
<td>Scheduling</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Interim pregnancy</td>
</tr>
<tr>
<td><strong>Any time</strong></td>
<td>Convenience</td>
<td>Low expulsion rate</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Must exclude pregnancy</td>
</tr>
<tr>
<td><strong>Emergency contraception (Cu T only)</strong></td>
<td>Pregnancy prevention</td>
<td>Not cost effective if used only for EC</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Convenience</td>
</tr>
</tbody>
</table>

Copper T IUC: Mechanism of Action

- Primary mechanism is prevention of fertilization
  - Reduce motility and viability of sperm
  - Inhibit development of ova
- Inhibition of implantation is a secondary mechanism

LNG-IUC’s: Mechanism of Action

- Cervical mucus thickened
- Sperm motility and function inhibited
- Endometrium suppressed
- Ovulation inhibited (in some cycles)
LNG-20 IUC Physical Characteristics

- Steroid reservoir
- levonorgestrel 20 µg/day

LNG-13.5 IUC

- 3.8 mm insertion tube
- Levonorgestrel 14 µg/day
- Decreases to 5 µg/d
- Average:
  - 6 µg/d over 3 years

LNG-IUC: “Off Label”

Non-contraceptive Benefits

- Decreased
  - Dysmenorrhea
  - Iron deficiency anemia
  - Long term risk of endometrial & ovarian cancer
- Can be left in place during and after transition to menopause for use with ET

Additional Therapeutic Use

- Symptomatic fibroids
- Endometrial hyperplasia
- Symptomatic endometriosis, adenomyosis

Meta-Analysis: Mirena® vs. Ablation for Heavy Menstrual Bleeding

- Equal rates of treatment failures
- Equal improvements in quality of life
- Less need for analgesia/anesthesia in LNG-IUC group
- Ablation requires additional contraception

References:

- Kaunitz, et al. OBG. 2009 May;113(5):1104-16b.
Menstrual Effects: LNG-IUC

- Hypomenorrhea; intermenstrual bleeding
- Management
  - Exclude PID, pregnancy; ectopic
  - NSAID’s
  - If persistent bleeding, check for anemia
- Remove IUC if abnormal bleeding is unacceptable to patient

Menstrual Effects: Cu IUC

- Heavier or longer menses or dysmenorrhea
  - Exclude PID, pregnancy
  - NSAIDs prophylactically WITH FOOD
  - Pre-emptive use for first 3 cycles
  - Start before onset of menses-- anti-prostaglandin effect
    - Naproxen sodium 220mg x2 BID (max 1100mg/day)
    - Ibuprofen 600-800mg TID (max 2400mg/day)
  - If heavy or persistent bleeding, check for anemia
- Remove IUC if bleeding is unacceptable to patient

Warnings and Precautions: Bleeding Pattern Alterations

- Skylla™ can alter the bleeding pattern and result in spotting, irregular bleeding, heavy bleeding, oligomenorrhea, and amenorrhea
- During the first 3 to 6 months of use, the number of bleeding and spotting days may be higher and bleeding patterns may be irregular. Thereafter, the number of bleeding and spotting days usually decreases but bleeding may remain irregular
- Amenorrhea develops by the end of the first year of use in approximately 6% of Skylla users
- A total of 77 subjects out of 1672 (4.6%) discontinued due to uterine bleeding complaints

Warnings and Precautions: Bleeding Pattern Alterations (continued)

- Emergency Contraception
  - Copper T380A
  - For Emergency Contraception

Copper T380A
For Emergency Contraception
Cu T for EC: A prospective, multicentre, cohort clinical trial

- Eighteen family planning clinics in China
- 1963 women requesting EC within 120 hours of unprotected intercourse.
- Followed at 1, 3 and 12 months after placement of CuT380A.
- No pregnancies occurred prior to or at the first follow-up visit, making CuT380A 100% effective as emergency contraception in this study.

Wu S, et al. BJOG 2010

A survey of women obtaining EC: are they interested in using the Cu IUD?

- n=941
- 34.0% said they were interested in EC method that was long term, highly effective and reversible.
- Interested women weren’t significantly different from non-interested women in relation to age, marital status, education, household income, gravidity, previous abortions, previous STIs or relationship status.
- Only 12.3% of these women could also pay $350 or more for the device.


A pilot study of the Cu T380A IUD and Oral Levonorgestrel for EC

- 60% chose oral LNG
- 40% chose the copper IUD.


Underutilization

Why Isn’t the IUC Used More in the US?

- Dearth of trained and willing professionals to place IUCs
- Negative publicity about method in ’70s
- Misconceptions by health care providers and the public

Weir, CMAJ. 2003
Stanwood, NL. Obstet Gynecol. 2002
Steinauer JE. Family Planning Perspectives 1997
**Family PACT Provider Survey**

- n=813
- Providers who think an IUC should not be inserted in:
  - Nullips: 50%
  - Adolescents: 58%
  - Women with a history of ectopic pregnancy: 63%
- Provider’s concern about PID affected willingness to recommend IUC
  - “A lot” (29%)
  - “Some” (61%)

**IUC Use By Female Ob/Gyns vs. All Women in the U.S.**

- 18% of Female Ob/Gyn physicians
- 0.7% of General Population

**Correcting Myths**

**IUCs Do Not Cause PID**

- PID incidence for IUC users same as the general population
- Risk is increased only during the first month after placement
- Preexisting STI at time of placement, not the IUC itself, increases risk
- No reason to restrict use based on sexual behaviors

**Rate of PID by Duration of IUC Use**

- Baseline PID risk: 1-2 cases /TWY
- Rate per 1000 Woman-Years
- n~30,000 women.

**Dalkon Shield**

Dalkon Shield- multi-filament string

Fertility Rates in Parous Women After Discontinuation of Contraceptive

<table>
<thead>
<tr>
<th>Months After Discontinuation</th>
<th>Pregna</th>
<th>IUC</th>
<th>OC</th>
<th>Diaphragm</th>
<th>Other methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>100</td>
<td>50</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>12</td>
<td>50</td>
<td>50</td>
<td>0</td>
<td>0</td>
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<tr>
<td>18</td>
<td>100</td>
<td>0</td>
<td>50</td>
<td>0</td>
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<tr>
<td>24</td>
<td>100</td>
<td>0</td>
<td>50</td>
<td>0</td>
<td>0</td>
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<tr>
<td>30</td>
<td>100</td>
<td>0</td>
<td>50</td>
<td>0</td>
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</tr>
<tr>
<td>36</td>
<td>100</td>
<td>0</td>
<td>50</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>42</td>
<td>100</td>
<td>0</td>
<td>50</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>


Ectopic Pregnancy Risk When Contraception Fails

<table>
<thead>
<tr>
<th>Method</th>
<th>Ectopic pregnancy</th>
<th>All pregnancy</th>
<th>Risk of ectopic pregnancy</th>
</tr>
</thead>
<tbody>
<tr>
<td>IUC</td>
<td>1</td>
<td>10</td>
<td>1.4</td>
</tr>
<tr>
<td>OC</td>
<td>1</td>
<td>1.5</td>
<td>1.7</td>
</tr>
<tr>
<td>Diaphragm</td>
<td>0.5</td>
<td>0.5</td>
<td>0.7</td>
</tr>
<tr>
<td>Other methods</td>
<td>0.1</td>
<td>0.1</td>
<td>0.7</td>
</tr>
</tbody>
</table>


US Medical Eligibility Criteria

- Menarche to age 20 US MEC -2
- Age 20 and older US MEC -1
- Nulliparity US MEC -2
- Parous US MEC -1
**Lng-20 IUC in Nullips**

- To evaluate the placement procedure and continuation rates of the LNG-IUS in nullips
- Placements considered “easy” by 72% of inserters (mostly midwives)
- 5% of patients were dissatisfied
- No perforations
- No pregnancies


**Lng-20 IUC in nulliparous women**

CONCLUSION:
Our results support the current practice in Sweden of offering LNG-IUC routinely to nulliparous women


**SFP on Nullips**


**Contraindications**

**Both IUC Products: US MEC 2010**

<table>
<thead>
<tr>
<th>Category 4</th>
<th>Category 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distorted uterine cavity</td>
<td></td>
</tr>
<tr>
<td>Post-partum endometritis</td>
<td></td>
</tr>
<tr>
<td>Post-abortion endometritis</td>
<td></td>
</tr>
<tr>
<td>Malignant GTD or ↑ hCG</td>
<td></td>
</tr>
<tr>
<td>Cervical/endometrial cancer</td>
<td></td>
</tr>
<tr>
<td>Current GC/CT/purulent cervicitis/PID</td>
<td></td>
</tr>
<tr>
<td>- Initiate: 4; Continue: 2</td>
<td></td>
</tr>
<tr>
<td>Pelvic TB</td>
<td></td>
</tr>
<tr>
<td>- Initiate: 4; Continue: 3</td>
<td></td>
</tr>
<tr>
<td>Postpartum (48h-4 wk)</td>
<td></td>
</tr>
<tr>
<td>Benign GTD with ↓ hCG</td>
<td></td>
</tr>
<tr>
<td>Increased risk of STIs</td>
<td></td>
</tr>
<tr>
<td>- Initiate*: 2/3; Continue: 2</td>
<td></td>
</tr>
</tbody>
</table>

*very high individual likelihood of exposure to GC or Ct is 3

**US Medical Eligibility Criteria 2010**

<table>
<thead>
<tr>
<th>Category 4</th>
<th>Category 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>LNG-IUS only</td>
<td>Current breast cancer</td>
</tr>
<tr>
<td>Breast cancer (&gt; 5 yrs NED)</td>
<td></td>
</tr>
<tr>
<td>Liver tumors, severe cirrhosis</td>
<td></td>
</tr>
<tr>
<td>Current MI or angina</td>
<td></td>
</tr>
<tr>
<td>Migraines with aura</td>
<td></td>
</tr>
<tr>
<td>AIDS (ARV drug interactions)</td>
<td></td>
</tr>
<tr>
<td>Complicated transplant</td>
<td></td>
</tr>
<tr>
<td>Lupus with anti-PL antibody</td>
<td></td>
</tr>
<tr>
<td>Copper IUC only</td>
<td>Lupus with thrombocytopenia</td>
</tr>
</tbody>
</table>


Postpartum IUC placement
US MEC 2010

<table>
<thead>
<tr>
<th>Condition</th>
<th>LNG-IUS</th>
<th>Cu-IUD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vaginal delivery or C/S</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Breast-feeding or non-lactating</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;10 min after delivery of placenta</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>10 min after delivery of placenta to &lt;4 wks</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>≥4 wks post partum</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Puerperal sepsis</td>
<td>4</td>
<td>4</td>
</tr>
</tbody>
</table>

IUC Use
Postpartum
With Lactation
Post abortion

How Is Postpartum IUC Placement Performed?

- IUC placement after vaginal delivery
  - Insert IUC within 10 minutes of placental delivery
  - Use sponge forceps on cervical lip
  - 2nd forceps to place IUC at uterine fundus
  - Cut string flush with external cervical os
  - Trim strings at postpartum visit

How Is Postpartum IUC Placement Performed?

- IUC placement at time of caesarean section
  - After delivery of placenta
  - Manually place IUC at fundus
  - Tuck strings thru cervix
  - Repair uterus
  - Trim strings at postpartum visit

IUC Use During Lactation

- Effectiveness not decreased
- No increased risk of uterine perforation
- Expulsion
- Decreased placement pain
- Reduced rate of removal for bleeding and pain
- LNG comparable to Cu T in breastfeeding parameters

Post Abortion IUC placement (WHO MEC, Cochrane Review)

- No difference in complications for immediate versus delayed placement of an IUC after abortion
- There were no differences in safety or expulsions after placement of an LNG-IUC compared to Cu-IUC
- Expulsion slightly greater when inserted after a 2nd trimester vs. a 1st trimester abortion
- US Medical Eligibility Criteria 2010
  - First trimester abortion: USMEC-1
  - Second trimester abortion: USMEC-2

Excellent Time for IUC Placement-Post Abortion

- Most women ovulate by 21 days post abortion
- Range 8-37 days
- This is true for:
  - 1st trimester
  - 2nd trimester
  - Medical abortion
  - Spontaneous abortion

IUC Placement Post Abortion

- Half of abortions are repeat procedures
- 40% of women scheduled for IUC placement did not return for the procedure
- Immediate post-abortion IUC placement can reduce repeat unintended pregnancy by two-thirds.

IUC After Medical Abortion

- Verify patient is no longer pregnant; may place IUC once medical abortion is complete
- 4.1% expulsions
- Continuation rate at 3 months - 80%.

Screening Tests and Patient Instructions

Pre-IUC placement Screening

- No routine screening tests
  - CT/GC:
    - if age <26 and due for annual screening
    - if screening is recommended based on risk
    - Pap test if due
  - Any indicated screening test can be done on the day of IUC placement

Pre-placement Guidelines

- Prophylactic antibiotics
  - No value for routine administration
  - May reduce PID in high prevalence GC/CT sites
- Premedication
  - NSAID 30-60 minutes before placement is common, but no effect on pain or discontinuation
  - Consider paracervical block if history of cervical os or canal stenosis
Post-IUC Placement Counseling

- The client should return if
  - String cannot be located (use barrier method)
  - Symptoms of pregnancy
  - Symptoms of infection
    - Pain, deep dyspareunia, fever, foul discharge
    - Sudden unexplained pelvic pain occurs
    - Excessively heavy bleeding

Complications

Uterine Perforation

- More likely to occur in relation to
  - Posterior uterine position
  - Extreme flexion
  - Skill/experience of provider
  - Placement 2 days-4 weeks after childbirth
- Typical location is midline at uterine fundus...if so, perforation often is asymptomatic, benign
- Suspect if sounding is much deeper than expected

Management of Uterine Perforation

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

Prevention of Uterine Perforation

- Why sound the uterus at all?
  - Determine the “pathway” to the fundus
  - Preliminary dilation of the internal os
  - Establish depth to fundus to set flange
  - Ensure depth within 6-10 cm limits
- Bend sound to mimic uterine flexion
- Brace fingertips on speculum to achieve control of force while advancing the sound
- EMB device can be used instead of metal sound
- Open IUC package after sounding completed

Vasovagal

- Mechanism
  - Due to bradycardia + peripheral vasodilation
  - AKA: non-cardiogenic syncope, cervical shock
- Association with IUC placement
  - Syncope in 2% of placements
  - Convulsions in 1 per 2,000 placements
  - More likely with
    - Pain with cervical manipulation
    - Nulliparity
    - Previous episodes of vaso-vagal fainting
    - Dehydration or NPO

Presyncopal Signs

- Facial pallor (distinct green hue)
- Yawning
- Pupillary dilatation
- Nervousness

Symptoms - Presyncopal

- Weakness
- Light-headedness
- Diaphoresis
- Visual blurring
- Headache
- Nausea
- Feeling warm or cold

Vasovagal Prevention

- Good hydration (electrolyte/ sports drink)
- Eat before placement

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 activate the skeletal-muscle pump to augment venous return and abort the reflex

Lightheadedness and Syncope: Other Causes

- Hyperventilation
  - Due to low CO₂ levels (respiratory alkalosis)
  - Heart rate normal or tachycardia
  - Treat with shallow breaths or re-breathing bag
- Local anesthetic toxicity (if cervical block)
  - CNS: lightheadedness, restlessness, anxiety, tinnitus, tremor, twitch, perioral numbness, visual changes, seizure, respiratory arrest
  - CV: bradycardia, arrhythmia, hypotension

Bleeding from Tenaculum Site

- Remove tenaculum slowly
- Apply pressure for at least 60 seconds
- Chemical cautery
  - Silver nitrate
  - Monsel’s solution
- Suturing very rarely is necessary
IUCs: Management of Cramping

- Mild: recommend NSAIDs
- Severe or prolonged
  - Examine for partial expulsion, perforation, or PID
  - Remove IUD if severe cramping is unrelated to menses or unacceptable to patient

Actinomyces-Like Organisms (ALO)

- *Actinomyces israelii* has characteristics of both bacteria and fungus; part of GI flora
- May asymptotically colonize the frame of the IUC, which in itself is not dangerous
- Very small percentage 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

Missing IUC String: Diagnosis

- Possibilities...
  - Expulsion, pregnancy, embidment, translocation
- Initial management
  - Probe for strings in cervical canal
    - Cytology brush to tease from canal
    - Endocervical speculum or forceps
  - Rule out pregnancy
  - Prescribe back-up contraceptive method until intrauterine location is confirmed

Genital Tract Infections

- If cervical or vaginal infection diagnosed
  - IUC removal not necessary
  - Treat infection
  - Counsel re: prevention of STI transmission
- If PID diagnosed
  - IUC removal usually not necessary
  - Treat infection
  - Recommendations to remove IUC are not evidence-based
  - Consider removal if no improvement 48-72 hours after starting treatment

IUC Expulsion

- Occurs in 1-10% IUC placements within first year
- Risk of expulsion related to
  - Provider’s skill at fundal placement
  - Age, parity, BMI, uterine configuration
  - Time since placement (↑ within first 6 mos)
  - Timing of placement (menses, postpartum, post-abortion)
- Asymptomatic expulsion may present with pregnancy
- Partial expulsion may present with
  - Pelvic pain, cramps, intermenstrual bleeding
  - Pregnancy

Missing IUC String

- No IUC string in canal
  - Pregnancy last negative

- Desires removal
  - Ultrasound
    - In Situ
      - Absent
      - Ultrasound
        - Absent
      - Absent
      - Flat plate of abdomen
    - Absent
    - Ultrasound
      - Present
      - Perforated
    - Present
    - Expelled
      - Perforated

- Desires retention
  - Ultrasound
    - In Situ
      - Absent
      - Flat plate of abdomen
  - Absent
  - Ultrasound
    - Present
    - Perforated

- Refer for hysteroscopy
- Examine
  - IUC strings present
  - IUC string missing
  - IUC string visible
  - IUC string not visible

- Prabhakaran S. et al. Contraception. 2011
Missing IUC String: Treatment

- In situ (intrauterine) placement: desires continuation
  - Leave in place for remainder of IUC lifespan
- In situ placement: desires removal
  - Use straight or “alligator” forceps, & simultaneous
    real time pelvic ultrasound
  - Crochet hook best for circular IUCs; less helpful with
    T-shaped IUCs
  - If unsuccessful, extract via operative hysteroscopy
- Translocation (IUC in peritoneal cavity)
  - Extract via operative laparoscopy

Pregnancy With IUC In Situ

- Determine site of pregnancy (IUP or ectopic)
- If intrauterine pregnancy confirmed
  - Termination planned: await procedure
  - Continue pregnancy: remove IUC if strings visible
  - Removal decreases risk of spontaneous abortion, premature delivery
- Retention of IUC (if strings not visible)
  - Increase surveillance for SAB, pre-term birth
  - No greater risk of birth defects (extra-amniotic)

LNG-IUC Isn’t at the Fundus?

- There can be migration within the uterine cavity
- A LNG-IUC in lower uterine segment is still effective
- Removal of the device is necessary only if
  - A portion of it protrudes from the cervix, or
  - There is excessive cramping with a low-lying IUC

What Should I Do if the Cu 380A Isn’t at the Fundus?

- Fundal placement is necessary for optimal efficacy
- A copper IUC in the lower uterine segment is less effective
- Removal of the device and re-insertion of a new device at the fundus is best to insure efficacy
- Do not “push” a partially expelled or low lying device up to the fundus

Perimenopause & Menopause

- Leave in place until through transition
- LNG IUC can prevent perimenopausal bleeding
- Consider leaving LNG IUC in for HT
- OK not to replace if slightly overdue

IUC Post Menopause?

- Strings seen: remove
- Consider placing LNG IUC for HT
  - Less systemic absorption of progestin

Placement Practicum


IUC Placement Practicum

Placement of Cu-T IUC

Steps for IUC Placement

- Perform bimanual pelvic exam to determine anterior or retroflexion
- Inspect cervix for mucopus
- Cleanse cervix with antiseptic
- Use of sterile gloves vs. “no-touch” technique
- Apply tenaculum
  - Routine vs. selective local anesthetic injection
  - Hold hand in palm-up position
  - “Squeeze” closed; don’t “snap” ratchet
  - Horizontal or vertical application (purchase)
- Routine vs. selective use of cervical block

Steps for IUC Placement

- Sound the uterus
  - Purposes
    - Determine the “pathway” to the fundus
    - Preliminary dilation of the internal os
    - Establish depth to fundus to set flange
    - Ensure depth within 6-10 cm limits
  - Bend sound to mimic uterine flexion
  - Brace fingertips on speculum to achieve control of force while advancing the sound
  - EMS* device can be used instead of metal sound

EMS*: endometrial sampling

ParaGard Placement*

- Load arms into inserter

* Excerpted from package insert
ParaGard Placement
• Load arms into inserter

ParaGard Placement
• Advance insertion tube to fundus
• Fundal resistance should be coincident with the marker reaching the exocervix

ParaGard Placement
• Pull back on inserter tube while holding white rod steady to deposit IUC in cavity

ParaGard Placement
• Push inserter tube until resistance to seat the arms of the IUC in the fundus

ParaGard Placement
• Withdraw the white rod while holding inserter tube steady

ParaGard Placement
• Slowly withdraw the inserter from the cervical canal
• Use inserter tube as a guide for cutting the strings
• Trim threads to 3-4 cm.
IUC Placement Practicum

- Placement of LNG-IUC 20 Mirena

Mirena: The Inserter

“Never let go of the Slider!!”

Steps for Mirena Placement*

1. Open sterile package
2. Release the threads
3. Make sure the slider is in the furthest position away from you
4. Check that the arms of the IUC are horizontal

* Excerpted from package insert

Steps for Mirena Placement*

5. Pull on both threads to draw IUC system into insertion tube
6. Both knobs at ends of IUC arms are now within the inserter

Steps for Mirena Placement*

7. Fix threads tightly into the cleft at near end of inserter shaft

Figure 4. Threads are fixed tightly in the cleft

Steps for Mirena Placement*

8. Set upper edge of movable green flange to the depth of uterine sound

Figure 5. The sound measure
Steps for Mirena Placement*

9. Hold slider with forefinger, or thumb, firmly in furthermost position

10. Move inserter thru cervical canal until flange is about 1.5-2.0 cm from cervix - allows sufficient space for IUC arms to open

11. While holding inserter steady, release arms of IUC by pulling slider back until it reaches the raised mark on inserter

12. Push inserter gently until flange touches cervix. The IUC should be in fundal position

13. Pull down on slider all the way; threads will uncleat automatically and release IUC system

Double check that the strings are uncleated before withdrawing the inserter

14. Remove inserter and cut threads about 4-5 cm from cervix

Use inserter tube as a guide for cutting the strings

15. Measure and record in patient’s chart

• Reduce expulsion rate by waiting for strings to be released from cleft before withdrawal
IUC Placement Practicum

• Placement of LNG-IUC 13.5 Skyla

How to Reload the Reloadable Demonstration Inserter

There are 2 types of demonstration units. One is like the real product; it cannot be reloaded. The other is the reloadable Inserter with visible threads.

1. When the slider is at bottom position, tension threads gently, so that the T-body site horizontally on the tip of the inserter.
2. Bring slider forward to the mark to lock the threads, while keeping a gentle tension on the threads.
3. Release the threads. The inserter is now ready to be reused.

Do NOT attempt to reload the dummy by pulling from the threads when the slider is at the mark. The threads are already locked and will not pull.

Insertion Procedure

Step 1: Opening of the package

• Open the package. The contents of the package are sterile.

• Using sterile gloves, lift the handle of the sterile inserter and remove from the sterile package.

Step 2: Load Skyla™ into the Insertion Tube

• Push the slider forward as far as possible in the direction of the arrow while moving the insertion tube over the Skyla T-body to load Skyla into the insertion tube. The tip of the arms will meet to form a rounded end that extends slightly beyond the insertion tube.

• Important: Maintain forward pressure against the thumb or forefinger on the slider. DO NOT move the slider backward at this time as this may prematurely release the threads of Skyla. Once the slider is moved beyond the mark, Skyla cannot be reloaded.

Step 3: Setting the Flange

• Holding the slider in this forward position, set the upper edge of the flange to correspond to the uterine depth (in centimeters) measured during sounding.
Insertion Procedure

Step 4: Skylla™ is now ready to be inserted
- Continue holding the slider in the forward position. Advance the inserter through the cervix until the flange is approximately 1.5 to 2 cm from the cervix and then pause. Do not force in inserter if necessary, grasp the cervical canal.

Difficult IUC Placement

Step 6: Advance to the fundal position
- Advance the inserter gently towards the fundus of the uterus until the flange touches the cervix. If you encounter undue resistance do not continue to advance. Skylla™ is now in the fundal position. Fundal positioning of Skylla™ is important to prevent expulsion.

Step 7: Release Skylla™ and withdraw the inserter
- Holding the inserter firmly in place, release Skylla by moving the slider all the way down.
- Continue to hold the slider all the way down while you slowly and gently withdraw the inserter from the uterus.

Insertion of threads
- Using a sharp, curved scissors, cut the threads perpendicular, leaving about 3 cm visible outside of the cervix (cutting threads at an angle may leave sharps). Do not apply tension or pull on the threads when cutting to prevent displacing Skylla™.

Prescribe analgesics, if indicated. Keep a copy of the Consent Form with the lot number for your records.
Difficulty Sounding

• Use greater outward traction on the tenaculum to minimize canal-to-endometrial cavity angulation
• Place paracervical or intracervical block to relax cervical smooth muscle and reduce pain
• Use os finder device, if available
• Dilate internal os with metal dilators to #13F (4.1 mm)
• If unsuccessful, return at a later date with use of misoprostol cervical priming

Paracervical Block

• Target is uterosacral ligaments
• Inject at reflection of cervico-vaginal epithelium
• 2 (5, 7 o’clock) or 4 sites (4, 5, 7, 8 o’clock) submucosally to depth of 5 mm
• Use spinal needle or 25g, 1½” needle + extender
• Moore-Graves speculum allows for more movement
• Tips
  – Start with ½-1 cc. at tenaculum site
  – Disguise pain of needle insertion with cough
  – WAIT 1-2 minutes for set up before procedure

Intra-cervical Block

• Targets the paracervical nerve plexus
• 1 ½ inch 25g needle with 12 cc “finger lock” syringe
• Inject ½–1 cc. local anesthetic at 12 o’clock, then apply tenaculum
• Angulate needle at the hub to 45° lateral direction
• At 3 or 9, insert needle into cervix to the hub 1 cm lateral to external os, aspirate
• Inject 4 cc of local, then last 1 cc while withdrawing
• Rotate barrel 180°, then inject opposite side
**Intracervical Block**

- 9 o’clock
- 7 o’clock
- 5 o’clock
- 6 o’clock

**Prophylactic Misoprostol in Nulliparous Women**

- Pain scores no different in the two groups
- Increase in preinsertion side effects
- In one trial:
  - Insertion considered easier
  - “Misoprostol facilitates IUD placement and reduces the number of difficult and failed attempts of placements in women with a narrow cervical canal”

  Sauv I et al., Human Reproduction 2007; 22, (10): 2647
  Shaefer E et al., Contraception 2010

**Tips for IUC Placement in Women with Fibroids**

- Determine fibroid location by ultrasound
  - Fundal fibroids (intramural, sub-serous) that do not distort uterine cavity do not preclude IUC use
  - Large sub-serous fibroids, especially in lower uterine segment, contraindicate IUC use
  - Evaluate for other pathology, e.g., polyp
- Ultrasound guidance may facilitate safe placement
- No data on efficacy, but probably not compromised with LNG-IUS or with Cu-T if fundal placement

**FPACT Rules, Billing & Coding**

**Family PACT IUC Policy: Purchase and Records**

- IUCs:
  - FDA-approved devices, labeled for US use, and obtained from FDA approved distributors
- Providers:
  - Record the lot number in the med record
  - Keep a log of all IUCs placed for > 3 yrs
  - Maintain invoices ≥ 3 years
- Patients:
  - Provided with the dates of placement and expiration

**Billing Instructions for IUCs Primary Diagnosis Codes**

- S401: Evaluation prior to initiation of the method, whether or not the IUC is inserted that day
  - Use S401 when performing the placement of the first IUC for this client
- S402: Maintain adherence and surveillance for a current user of an IUC, whether or not the client is new to the provider
  - Use S402 when replacing an IUC with another of the same type or a different type
  - Both placement and removal may be billed on the same date of service
Billing Instructions for IUCs placement or Removal Procedures

- placement
  - CPT 58300: placement of IUC
  - 58300-ZM: placement supplies
  - Kit: X1522 (ParaGard) or X1532 (Mirena)
  - E&C: contraceptive counseling visit
- Removal
  - CPT 58301: Removal of IUC
  - 58301-ZM: Removal supplies
  - E&C: contraceptive counseling visit

IUC Complication Coverage

- New Family PACT benefits for IUCs
  - CPT-4 code 76857: Ultrasound, pelvic (nonobstetric)
  - CPT-4 code 76830: Ultrasound, transvaginal
  - Billing requirements for code 74000 are revised
- 3 codes billed in conjunction with primary diagnosis code S402 and secondary diagnosis code V45.51 (intrauterine contraceptive device). A Treatment Authorization Request is not required.
- S4032 will no longer be a valid Family PACT PDC effective for dates of service on or after June 1, 2011.

IUC Complication Coverage

- IUC complications
  - S403 Vaso-vagal episode
  - S4031 Pelvic infection (secondary to IUC)
  - S4032 “Missing” IUC- no longer a valid code
  - S4033 Perforated or translocated IUC
- Covered complication services include
  - Hysteroscopy, dilation and curettage
  - Laparoscopy/ laparotomy
- All complication services must be approved by TAR
- Consult PPBI @ familypact.org

Take Home the “IUCs”

- Keep one in your lab coat
- One in each room
- Give them to your patient to hold, feel and play with while discussing the method
- Show her how to feel the threads with it