Controversies in Postpartum Contraception

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Overview

- Physiology of lactation and return of ovulation
- Lactational amenorrhea method
- Timing of post-partum visit
- Review of methods used post-partum
- PP contraception for GDMs
- Insurance issue
  - Full Medi-Cal
  - Pregnancy-only Medi-Cal
  - Family PACT

Post-partum Contraception: General Considerations

- Goals in choice of postpartum (pp) contraception
  - Efficacy: limit family size, adequate birth spacing
  - Support successful breastfeeding
  - In GDMs, avoid conversion to frank diabetes
- Most women begin intercourse within 1-2 months
  - 60-70% are sexually active by 6 weeks pp
  - Only 4% abstinent by the end of the 12th pp week

Pregnancy Breast Physiology

- Development of the means for milk production
  - E: growth of breast ducts; P: growth of alveoli
  - Prolactin, insulin, cortisol, thyroxine, HGH necessary
- Hormonal blockade of milk production and release
  - E + P are a “brake” on milk production in pregnancy
  - After delivery, E + P decline; milk production starts
  - E + P suppress initiation, not established lactation
  - After delivery, initiation of lactation prevented by
    - Reapplying the brake: give E or P in high doses
    - Suppress prolactin: bromocriptine x 14 days
**Post-partum Ovulation Patterns**

- Mechanism of postpartum anovulation
  - Suckling reflex suppresses GnRH; decreases LH
  - Increased prolactin suppresses ovulation
- Resumption of ovulation in non-lactating women
  - Normal FSH, LH in 3-5 wks
  - Ovulate in 6-7 wks (median 45 days)
  - None before 25 days from the delivery
- Half of women not fully breastfeeding will ovulate before the 6th pp week
- Most early postpartum bleeds are anovulatory or have luteal phase insufficiency

**Post-partum Ovulation Patterns**

- Resumption of ovulation in lactating women
  - Intensity, frequency, duration of suckling
  - Time elapsed since delivery
  - Maternal nutritional state
  - Rate of weaning: rapid > gradual weaning
  - Introduction of supplementary feeding (ovulation usually begins 6 weeks later)
- Some nursing women will ovulate before the first postpartum menses

**Lactational Amenorrhea Method (LAM)**

- Effectiveness
  - Pregnancy rate: 1-2% by 6 months postpartum
  - 7% by 12 months; 13% by 24 months
- Bellagio Conference Consensus (1989)
  - Nurses "on demand" (> 5 feeds/day; > 65 min total)
  - Breast milk is only nutrition to newborn; no supplementary bottle feedings or other foods
  - No bleeding episode beyond 56 days from delivery
  - Nursing of newborn for less than 6 months

**LAM: Summary**

- LAM works well, but return of fertility is multifactorial and unpredictable
- Ovulation may precede bleeding beyond 10 wks post-partum
  - LAM is less effective from 10 wks-6 months
- LAM is unforgiving of imperfect use
- Use another method at 6 months, or sooner if menstrual bleeding occurs
The postpartum visit: it’s time for a change in order to optimally initiate contraception
Leon Speroff\textsuperscript{a}, Daniel R. Mishell Jr. \textsuperscript{b,*}
Contraception 2008;78:90–98

- “The 6 week postpartum visit is an anachronism”
- At the 3 week visit, evaluate whether no, partial or full (and exclusive) breast feeding
- Apply “The Rule of 3’s”
  - If no or partial breast-feeding, contraception should be initiated during the third postpartum week
  - If full breast-feeding, contraception should be started during the third postpartum month
- At the 3 month visit, initiate a method if breastfeeding or follow-up women who started a method at 3 weeks

\textbf{Lactational Amenorrhea Method}

Beyond 6 months

10 weeks - 6 months

Delivery -10 weeks

\textbf{WHO Medical Eligibility Criteria}

- WHO Medical Eligibility Criteria for Contraceptive Use – 3rd edition - 2004
  - www.who.int/reproductive-health/publications/mec/
  - www.reproductiveaccess.org/contraception/WHO_chart.htm
- WHO Selective Recommendations for Contraceptive Use 2008
  - http://www.who.int/reproductive-health/publications/spr/index.htm

<table>
<thead>
<tr>
<th>WHO Category</th>
<th>Definition</th>
<th>Recommendation</th>
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<tbody>
<tr>
<td>1</td>
<td>No restriction in contraceptive use</td>
<td>Use the method</td>
</tr>
<tr>
<td>2</td>
<td>Advantages generally outweigh theoretical or proven risks</td>
<td>More than usual follow-up needed</td>
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<tr>
<td>3</td>
<td>Theoretical or proven risks outweigh advantages of the method</td>
<td>Clinical Judgment that this patient can safely use</td>
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<td>4</td>
<td>The condition represents an unacceptable health risk if the method is used</td>
<td>Do not use the method</td>
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### 2004 WHO Medical Eligibility Criteria

#### Not breastfeeding

<table>
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<tr>
<th>Time Period</th>
<th>OC</th>
<th>P/R</th>
<th>POP</th>
<th>DMPA</th>
<th>Implant</th>
<th>Cu-IUC</th>
<th>LN-IUC</th>
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<td>1</td>
<td>1</td>
<td>1</td>
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<td>3</td>
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<tr>
<td>&gt; 4 weeks</td>
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<td>1</td>
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#### Breastfeeding women

<table>
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<tr>
<td>&gt; 6 months</td>
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<td>1</td>
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### Post-partum OC's: Effect on Lactation

- No change in composition of milk due to OCs
  - Iron and copper levels in milk not affected by OCs
- If started before establishment of lactation, high dose estrogen decreases quantity of milk
- If low dose OCs started after lactation is established, minimal effect on quantity of breast milk
- POPs have no effect on either the quantity or composition of breast milk
- Women who use OCs have a lower incidence of breast feeding after the 6th pp month
  - Mean use: 3.7 months with OCs vs. 4.6 months controls

### Post-partum OC's: Newborn Risk

- General rule: 1% of ingested drug secreted in breast milk
- Ethinyl estradiol reaching newborn is comparable to amount of natural estradiol reaching the newborn when not on OC’s
- No short term effect on infant; 1 long term study shows no effect on neurological development
- Newborn growth rates not affected by OC use
  - Any loss of milk volume compensated by increased suckling or food supplements
**Post-partum OC's: Maternal Risk**

- Changes in maternal clotting factors persist for 4 weeks after term delivery
- Concern: pregnancy hypercoagulability + OC's may increase risk of VTE
  - Increased VTE risk up to 4 week pp in population
  - Not studied in healthy, ambulatory low-dose OC users vs. controls
- If increased risk, applies only to combination OC's, not seen with POPs

**Post-partum OC's: Clinical Guidelines**

- Non-nursing women: ambulating, no DVT risks
  - Combined OCs (COC) starting 3-4 weeks postpartum
- Nursing women
  - Conservative approach
    - Avoid combined OCs; OK to use POPs
    - Switch to combined OCs at 3 months or when breast feeding completed
  - Liberal approach
    - COCs once lactation well established (> 3-4 wks)
- If combination pills used, use 20 mcg estrogen dose
  - LoEstrin 1/20, Mircette, Alesse

**Post-partum Long-acting Progestins**

- DMPA
  - Mildly lactogenic; no change in milk composition
- Implants (Implanon, Norplant studies)
  - If inserted ≥ 4-6 wks post-partum, no effects on milk volume, content, or newborn growth rates
- Administration before hospital discharge
  - Advantage
    » Protection if doesn’t return for post-partum visit
  - Disadvantages
    » Unnecessary for first 4 weeks
    » May be difficult to differentiate anatomic bleeding from method “side effect” bleeding

**2004 WHO MEC: Postpartum IUC Insertion**

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<tr>
<th>Cu-IUD</th>
<th>LNG-IUD</th>
<th>Comment</th>
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<td>48 hours to 4 weeks</td>
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<tr>
<td>&gt; 4 weeks</td>
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</table>

- Guidelines are identical in lactating and non-lactating women
- Insert IUC within 15 minutes of placental delivery
- Use sponge forceps on cervical lip; 2nd sponge forceps to insert
- Cut string flush with external cervical os
Post Abortion IUC Insertion

- 2004 WHO MEC, Cochrane Review

  - Rationale: 42% of women scheduled for post-TAB insertion fail to return for the procedure
  - No difference in complications for immediate versus delayed insertion of an IUD after abortion
  - Expulsion more likely when an IUD was inserted following a 2nd trimester vs. 1st trimester abortion
  - No differences in safety or expulsions for post-abortion insertion of an LNG-IUD vs. Cu-IUD

Post-partum Barrier Methods

- Barrier methods are the most widely used method of contraception among lactating women
- Avoid vaginal barriers if heavy bleeding (TSS)
- Lubricated condoms
  - Good choice if reduced vaginal lubrication
  - Protect against late postpartum endometritis induced by sexually transmitted pathogens
- Diaphragm, cervical cap should be fitted >6 weeks postpartum to permit return of normal anatomy

Diabetes and Contraception

- Progestins may increase insulin resistance, but not usually to the point of clinically significant ▲ blood glucose
- Estrogen increases risk of thrombosis in vessels damaged by diabetic vascular disease
- CHC may be used in diabetics in the absence of clinically-manifest vascular disease, including
  - Retinopathy, nephropathy
  - Peripheral vascular disease, heart disease

WHO MEC 2004: Diabetes

- History of gestational diabetes: all are WHO-1
  - DM without vascular disease (+ insulin)
    - WHO-1: Cu-IUD
    - WHO-2: All others
- DM with vascular disease or DM > 20 years
  - WHO-3: OC, P/R, DMPA
  - WHO-2: POP, Implanon, LNG-IUD
  - WHO-1: Cu-IUD
Contraception and Gestational Diabetes Mellitus (GDM)

- Studies showed that POP (if breastfeeding), DMPA (+ BF) may hasten insulin dependence
- GDMs who become frankly diabetic may continue CHC or progestin-only contraceptives
- If GDM, ADA and ACOG recommend
  - 2 hour PGL (75 gm) 6 weeks postpartum
  - Given >50% chance of Type 2 DM in next 10 years, repeat diabetes screening annually, irrespective of contraceptive method

DMPA and Risk of T2DM in Latina Women with Prior GDM

Xiang AH et al. Diabetes Care 2006:29:613

- Observational cohort of 526 Hispanic women with prior GDM who elected COC (n=430) or DMPA (n=96), 1987-97
- Annual diabetes incidence rates
  - DMPA group 19%
  - COC group 12%
- Unadjusted hazard ratio 1.58 (1.0-2.5, p=0.05)
- HR adjusted for weight gain 1.07
- Conclusion: increased rate of diabetes in DMPA users may be attributable to excess weight gain
  - In DMPA users, diabetes is twice as likely if breastfeeding

ADA : Contraception After GDM

Diabetes Care, July 2007

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<tr>
<th>Method</th>
<th>OC</th>
<th>P/R</th>
<th>POP BF</th>
<th>POP Not BF</th>
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- Avoid OC, patch, and ring if cardiovascular disease or risk factors
- POPs are considered “first line” in T1 diabetics, non-lactating GDMs
- Long-acting progestins are first line if compliance with a daily method is a problem or estrogen-containing methods are contraindicated

Post-Partum Contraceptive Coverage

- Commercial health insurance
  - Full contraceptive coverage
- Medi-Cal
  - “Full-scope” Medi-Cal: full contraceptive coverage
  - “Pregnancy-only”: eligibility for ends the last day of the month in which the 60th post-partum day occurs
    » Includes all Medi-Cal covered contraceptive methods
- Family PACT
  - Women with other health coverage (including Medi-Cal/pregnancy-only) are not eligible
  - Activate Family PACT only after Medi-Cal eligibility is no longer active