Short-Term Birth Interval: Counseling Family Planning Patients

Satellite Conference and Live Webcast
Thursday October 4, 2007
2:00 - 4:00 p.m. (Central Time)

Produced by the Alabama Department of Public Health
Video communication Division and Distance Learning Division

Faculty

Cynthia Dubin, MSN, FNP, CNM

Emory University Nurse-Midwifery Service, Grady Health System

Department of Gynecology and Obstetrics

Emory University School of Medicine

Objectives

- **Define short term birth interval**
- **Define optimal interpregnancy interval**
- **List and describe risks associated with short term birth interval**

Objectives

- **Discuss need for family planning services following a pregnancy and the importance of promoting women's health between pregnancies**
- **Discuss how to incorporate this knowledge into clinical practice**

Objectives

- **Dispel myths that women cannot conceive within 6 weeks postpartum or during breastfeeding**

Short Term Birth Interval

- **Variously defined; generally accepted to mean 24 months or less between one birth and the next**

Interpregnancy Interval

- The interval between the end of one pregnancy and the conception of the next pregnancy

Fuentes-Afflick & Hessol, 1999

- 289,842 singleton infants born to parous women in 1991
- Objective: determine whether interpregnancy intervals were associated with risk of premature delivery

Fuentes-Afflick & Hessol, 1999

- Women with interpregnancy intervals ≤ 18 months were 14-47% more likely to have very or moderately premature infants than were women with intervals of 18-59 months

Zhu et.al., 1999

- 173,205 infants born in Utah 1989-1996
- Evaluated interpregnancy interval in relation to low birth weight, preterm birth, small for gestational age

Zhu et.al., 1999

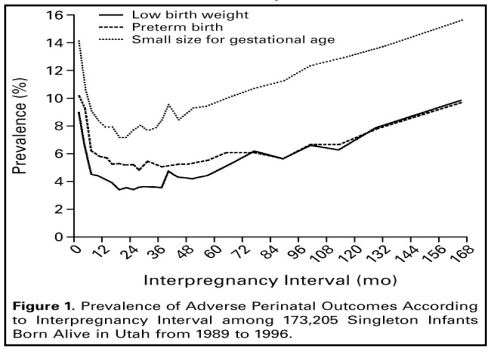

Figure 1. Prevalence of Adverse Perinatal Outcomes According to Interpregnancy Interval among 173,205 Singleton Infants Born Alive in Utah from 1989 to 1996.

Zhu, et.al.

- Best outcomes were in infants conceived 18-23 months after a live birth
- Risk of low birth weight, preterm birth, small for gestational age was 30-40% higher among infants conceived ≤ 6 months after a birth than among infants conceived between 18-23 months after a birth

Klerman, et.al., 1998

- 4400 women receiving care in county clinics who had two consecutive singleton births between 1980 and 1990
- Women with short interpregnancy intervals were more likely to deliver preterm
  - <13 weeks odds ratio 1.9
  - 13 to 25 weeks odds ratio 1.4

Conde-Agudelo et.al., 2006

- Meta-analysis, 67 articles related to relationship of interpregnancy intervals and adverse perinatal outcomes
- Tables summarizing studies

Conde-Agudelo et.al., 2006

- Estimated pooled adjusted odds ratios
- Interpregnancy intervals < 18 months significantly associated with increased risk of adverse low birth weight, preterm birth, and small for gestational age infants

Conde-Aguledo, et.al.

- Compared with intervals of 18-23 months, infants born to mothers with <6 month interval
  - 40%: increased risk of preterm birth
  - 60% increased risk of low birth weight
  - 25% increased risk of small for gestational age

Conde-Aguledo, et.al.

- Intervals 6-17 months had significantly higher risk for these adverse outcomes (adjusted ORs, 1.05-1.14)

Conde-Agudelo et.al.,

- For fetal and early neonatal death, the highest risk was for interpregnancy intervals < 6 months and >50 months
- Unable to estimate pooled odds ratios between intervals and fetal and early neonatal death

Conde-Agudelo & Belizan, 2000

- Effect of short interpregnancy intervals on maternal outcomes
- 456,889 parous women delivering singleton infants

Conde-Agudelo & Belizan, 2000

- Women with interpregnancy intervals < 6 months - increased risks for maternal death, third trimester bleeding, premature rupture of membranes, puerperal endometritis, and anemia

Rawlings, et.al., 1995

- 1992 women with two consecutive pregnancies
- Black women with an interpregnancy interval of < 9 months had significantly increased risk of preterm delivery and low birth weight
- White women with an interval <3 months had significantly increased risk of adverse outcomes

Optimal Interpregnancy Interval

- Infants conceived 18-23 months after a previous live birth have the lowest risk of adverse perinatal outcomes

Hypotheses

- Maternal depletion
- Stress
- Physiologic recovery

Evidence

- Interval between deliveries and the rate of uterine rupture after cesarean delivery

Esposito, et.al., 2000

- All patients with uterine scar failure (rupture or dehiscence) discovered at delivery 1990-1999 (n=43; 23 rupture, 20 dehiscence)
- Each subject matched with 3 controls who delivered by cesarean after unsuccessful trial of labor in whom no evidence of uterine scar failure found

Esposito, et.al,

- Interpregnancy intervals < 6 months associated with increased risk of uterine scar failure (17.4% vs 4.7% odds ratio)
- Mean interpregnancy interval shorter among patients with uterine rupture (20.4 $\pm$ 15.4 months) than among control subjects (36.52 $\pm$ 30.4 months)

Shipp, et.al., 2001

- 2409 women
  - Previous cesarean, no previous vaginal births
  - Underwent trial of labor
  - Delivered singletons at term
- 29 uterine ruptures (1.2%)

Shipp, et.al.,

- After controlling for potential confounding factors, short interdelivery interval was a statistically significant predictor of uterine rupture
- Women with interdelivery intervals $\leq$ 18 months are 3 times more likely to experience uterine rupture during a trial of labor after cesarean delivery

Non-Breastfeeding

- Women who do not breastfeed their infants ovulate, on average, 45 days postpartum, but may ovulate as soon as 27 days after delivery

Breastfeeding

- Women who breastfeed and those who breastfeed for longer periods tend to ovulate later after a birth than non-breastfeeding women

Return to Fertility in the Breastfeeding Woman

- Stimulation of the nipple by the infant's suckling suppresses ovulation
- Ovulation and the return of menses is delayed in women who fully or nearly fully breastfeed their infants
- Ovulation may preceed the first menses

Lactational Amenorrhea Method

- No or minimal supplementation, frequent feedings
- Not menstruating
- < 6 months

Provide Contraception to All Breastfeeding Women Because

- Many will breastfeed only for a short period
- Most will have intercourse within a few weeks of delivery
- Birth spacing is important to the health of mother and child
- She may ovulate before her first menstrual period

Take Home Message #1

The duration of postpartum infertility is variable and brief

Take Home Message #2

All women should receive counseling and information about optimal interpregnancy intervals and the need to use postpartum contraception

Postpartum Contraception Safe and Effective for All Women

- Depo-provera
- Progesterone-only pills
- Implanon
- IUD
- Sterilization
- Condom
- Female controlled barrier methods
- Withdrawal
- Abstinence

Postpartum Contraception for Non-Breastfeeding Women

- All of the above methods, plus
- Combined estrogen/progesterone methods: pills, Ortho Evra patch, NuvaRing
  - Use should begin 3 weeks after delivery

So What Does This Mean to Us?

- It is the responsibility of all health care providers caring for child-bearing women
  - to ensure that the women are aware that they may become pregnant again within a few weeks of delivery, and

So What Does This Mean to Us?

  - To ensure that they make plans for appropriate contraception if they do not wish to become pregnant

When?

- Receive information, make choice prenatally (ideally)
- Initiate method of choice before return of postpartum fertility

Preconception Care

- A set of interventions that aim to identify and modify biomedical, behavioral, and social risks to a woman's health or pregnancy outcome through prevention and management emphasizing those factors which must be acted on before conception or early in pregnancy to have maximal impact

Preconception care

Early prenatal care is not enough, and in many cases it is too late!

Preconception care

- Guidelines published by the CDC in 2006
- Should be implemented when caring for women of reproductive age including during the interpregnancy period
- Available at cdc.gov website

Components of Preconception Care

- Maternal assessment
- Vaccinations
- Screening
- Counseling

Interpregnancy Care Program Grady Memorial Hospital

- Pilot study; provided targeted primary care and social support to low-income, African American women who gave birth to very-low-birthweight babies

Interpregnancy Care Program Grady Memorial Hospital

- Included education on
  - Birth spacing
  - Working with women to develop their reproductive plans and
  - To help them achieve their desired interpregnancy interval

Care Interpregnancy Program Results of Birth Spacing Interventions

- Compared to women in the intervention cohort, women in the control cohort had, on average,
  - 2.57 times as many pregnancies within 18 months of the index VLBW delivery
  - 3.51 times as many adverse pregnancy outcomes

Ideas for Improving Birth Spacing

- Develop and distribute appropriate educational materials
- Start counseling and giving information on birth spacing at prenatal visits
- Provide “starter packs” of contraceptives before hospital discharge, with instructions on how to use them and when to start

Ideas for Improving Birth Spacing

- Ensure that prior to hospital discharge, the woman receives an appointment for her postpartum visit
- Family planning visits
  - Patient-centered, not provider-centered

Ideas for Improving Birth Spacing

- "There is no one contraceptive method that is best for every woman. If you find that this method doesn't suit you, come back, and we will find another method you like better."
- Follow up on DNKA's
- Reduce barriers to access to family planning services

Bundle With Other Services

- Educational materials concerning birth spacing can be distributed by
  - Obstetric providers
  - Pediatric providers
  - WIC offices
  - Family planning providers
  - Any site providing women's health care services

Upcoming Programs

Patients Rights and Responsibilities
Wednesday, November 14, 2007
2:00-4:00 p.m. (Central Time)

Emergency Preparedness
Thursday, November 15, 2007
12:00-1:30 p.m. (Central Time)