Research Summaries for Normal Birth

Amy M. Romano, MSN, CNM

ABSTRACT

In this column, the author presents summaries of four research studies that further support the benefits of normal birth. The topics of the studies address the downsides of routine episiotomy, the link of epidural analgesia to an increased risk of occiput-posterior babies, the relationship between normal birth and successful breastfeeding, and results from the first national survey of doulas.

Journal of Perinatal Education, 14(3), 56–60, doi: 10.1624/105812405X57606

Keywords: normal birth, episiotomy, occiput-posterior position, breastfeeding, doulas

Sign up at the Web site of the Lamaze Institute for Normal Birth (www.normalbirth.lamaze.org) to receive e-mail alerts of research summaries for normal birth.

SYSTEMATIC REVIEW FINDS NO BENEFIT TO ROUTINE EPISIOTOMY

- Hartmann, K., Viswanathan, M., Palmieri, R., Gartlehner, G., Thorp, J., Jr., & Lohr, K. N. (2005). Outcomes of routine episiotomy: A systematic review. *Journal of the American Medical Association*, 293(17), 2141–2148.

Summary

This systematic review, supported by the Agency for Healthcare Research and Quality, investigated the maternal outcomes of routine episiotomy versus restricted use of episiotomy. The researchers searched the literature for all relevant articles and used strict, methodical guidelines to identify those eligible for inclusion. Eligible studies were limited to randomized controlled trials for review of short-term outcomes. Prospective cohort studies were also included for review of long-term outcomes. The researchers determined the quality of the individual

studies and graded the strength of the evidence by consensus. Outcome measures included perineal injury and suturing, perineal pain, urinary and rectal continence, and sexual function.

Seven randomized controlled trials (RCTs) with a combined 5,001 participants compared early postpartum outcomes of restricted versus routine use of episiotomy. Only one RCT studied midline episiotomy, which is the technique most commonly used in the United States and Canada. (The other six studies examined mediolateral episiotomy, in which the cut goes off to one side of the anus.) The rates of episiotomy in each group varied widely across studies, and “restricted use” was poorly defined in several trials. The most restrictive definition was to avoid the procedure unless it was necessary for the well-being of the baby. The systematic review found that restrictive use of episiotomy was associated with increased likelihood of having an intact perineum, decreased risk of requiring sutures, and an increased risk of anterior lacerations

(though the data suggested these were typically less severe than perineal tears and did not always need suturing). The data on postpartum pain showed that restrictive use of episiotomy was associated with equivalent or better pain scores compared with routine episiotomy. Rates of infection and other healing complications were equivalent across groups.

Sixteen articles included data about continence or pelvic-floor muscle function. The review of the evidence showed no benefit to routine use of episiotomy with respect to urinary or rectal continence or pelvic-floor strength for up to three years following birth. (Compiler's note: Most studies included in this review were of mediolateral episiotomy, which, unlike midline episiotomy, does not tend to extend into the anal sphincter. Since anal sphincter injuries are associated with rectal incontinence, this means that this review cannot determine whether midline episiotomy, the type usually used in the U.S. and Canada, is not just of no benefit but causes rectal incontinence.) Longer-term data were not available.

Ten articles reported data about sexual function. The review of these studies showed that restrictive use of episiotomy was associated with earlier return to intercourse compared with routine use of episiotomy. No differences were found in women's reports of painful intercourse.

The reviewers concluded that there is no evidence that routine use of episiotomy results in improved maternal outcomes. They indict clinicians who "have been the primary agents to exercise choice to conduct or not conduct an episiotomy" (p. 2147) as perpetuating a practice that has lacked an evidence base for decades. The authors strongly encourage clinicians, hospitals, and birthing centers to work diligently to bring their rates of episiotomy below 8–10%, a rate that is possible when use is restricted to fetal indications.

Significance for Normal Birth

Routine episiotomy is an example of a care practice that continues unabated in many settings despite strong and consistent evidence showing that it does not improve outcomes. As this review's authors point out, rates of episiotomy in different birth settings range from below 10% to as high as 85% for spontaneous term births. This discrepancy, they argue, "is heavily driven by local professional norms, experiences in training and individual practitioner preference" (p. 2142). This is the strongest

evidence to date that episiotomy is over-used and results in more harm than good. More research is needed to clarify and reinforce the specific medical indications (i.e., acute fetal distress) for which episiotomy proves to be beneficial. In the meantime, Lamaze educators, consumers, and other normal birth advocates have the evidence necessary to demand an immediate reduction in episiotomy rates well below those currently achieved in most hospitals.

EPIDURAL ANALGESIA LINKED TO INCREASED RISK OF OCCIPUT-POSTERIOR BABIES

- Lieberman, E., Davidson, K., Lee-Parritz, A., & Shearer, E. (2005). Changes in fetal position during labor and their association with epidural analgesia. *Obstetrics & Gynecology*, 105(5, Part 1), 974–982.

Summary

This prospective cohort study used periodic ultrasound examinations during labor to evaluate changes in fetal position and their relationship with epidural analgesia. The researchers sought to determine whether epidural analgesia is responsible for higher rates of fetal malposition (occiput posterior [OP] or occiput transverse [OT]) or whether women experiencing labor with a malpositioned baby have more painful labors and, therefore, are more likely to request epidural pain relief.

Nulliparous women (those having their first babies) in spontaneous or induced labor at term with a single fetus in the head-down position were eligible for the study, which took place between 1999 and 2002 at Boston Medical Center in Massachusetts. A total of 1,562 eligible women were enrolled in the study.

Ultrasound imaging was performed to determine the fetal head position when the woman was admitted in labor and enrolled in the study. Sonograms were repeated when epidural analgesia was started, at 4 hours after the initial exam if an epidural had not yet been given, and when the woman was close to full dilation (at least 8 cm.).

Routine episiotomy is an example of a care practice that continues unabated in many settings despite strong and consistent evidence showing that it does not improve outcomes.

In a statistical model that controlled for various medical and obstetric factors that could affect outcomes, epidural use was still associated with a fourfold increase in the risk of OP birth.

Demographic data and information about the severity and location of pain were obtained from the women and additional medical and obstetrical data were obtained from the medical records. The fetal head position at the time of birth was obtained from the care provider attending the birth.

The researchers found that the position of the baby (occiput anterior [OA], OP, or OT) at the time of enrollment was a poor predictor of position at birth. For instance, of the women with an OP baby at birth, only 31% had a baby in the OP position at the initial ultrasound scan. Similarly, sonograms done later in labor were also poor predictors of position at birth. The data demonstrated that changes in fetal position were common during labor, with 36% of participants having an OP baby at the time of at least one scan. More than one-half of the women who gave birth to a baby in the OP position never had an OP baby at any ultrasound assessment in labor. Overall, 79.8% of babies were born in the OA position, 8.1% were OT, and 12.2% were OP at birth.

Epidural analgesia was strongly associated with delivery in the OP position: 12.9% of women with epidurals gave birth to babies in the OP position versus 3.3% of women without epidurals (relative risk 4.0, 95% CI 1.5–10.5). Transverse position was not related to epidural use. In a statistical model that controlled for various medical and obstetric factors that could affect outcomes, epidural use was still associated with a fourfold increase in the risk of OP birth.

The data suggest that the association between epidurals and OP babies is not because women in labor with an OP baby are more likely to request an epidural. Women who received epidurals were no more likely to have OP babies at enrollment or at the 4-hour or epidural ultrasounds. Furthermore, women with OP babies in labor or at birth reported the same degree of pain as those with OA or OT babies and were no more likely to report “back labor,” which is commonly thought to be related to the OP position. Finally, women with OP or OT babies at birth were much more likely than those with babies in the OA position to give birth by cesarean section, with 6.3% of OA babies born

by c-section versus 64.7% of OP and 73.8% of OT babies ($p < .001$).

Significance for Normal Birth

This study sheds light on the normal rotation of the baby during the course of labor. It challenges the common belief that posterior fetal position is a persistent condition characterized by “back labor.” More importantly, this study shows that the use of epidural analgesia in nulliparous women is associated with a fourfold increase in the risk of having an OP baby at the time of birth and that malpositioned babies are much more likely to be born by cesarean surgery. By evaluating the severity of pain and the fetal head position at various points throughout labor, the researchers demonstrated a causal link between epidurals and OP position and discredited the theory that women laboring with OP babies are more likely to request epidurals. Because there is a low likelihood of spontaneous vaginal delivery when the baby is OP, promoting an opportunity for optimal fetal rotation by using methods other than epidural analgesia for coping with pain whenever possible is essential.

EVIDENCE-BASED AAP POLICY EMPHASIZES LINK BETWEEN NORMAL BIRTH AND SUCCESSFUL BREASTFEEDING

- American Academy of Pediatrics [AAP]. (2005). Breastfeeding and the use of human milk. *Pediatrics*, 115(2), 496–506.

Summary

This policy statement, prepared by the American Academy of Pediatrics (AAP) Section on Breastfeeding, provides evidence-based information to help pediatric health-care professionals promote, protect, and support breastfeeding. It replaces the 1997 AAP policy statement, providing an update of the literature on the benefits of human milk and recommendations for the promotion and clinical management of breastfeeding for both healthy term infants and high-risk infants.

The AAP’s recommendations reflect a strong stance in favor of normal birth. Routine or unnecessary use of interventions that have been shown to interfere with breastfeeding, such as suctioning of the infant’s nose and mouth, are discouraged. The authors recommend minimizing the use of maternal medications that affect feeding behavior. They also advise delaying newborn routines such

as the first bath and administration of medications until after the first successful feeding, with skin-to-skin contact maintained from the time of birth whenever possible.

Significance for Normal Birth

The new policy statement definitively positions exclusive breastfeeding as the “normative model against which all alternative feeding methods must be measured. . .” (p. 496). Similarly, normal birth should be the reference model for maternity care, with interventions and deviations only occurring with sound medical rationale and after consideration of potential risks and adverse outcomes. When birth and breastfeeding are seen as a continuum, it is easier to understand how promoting normalcy in maternity care improves the likelihood of successful lactation. Conversely, care practices that disturb the normal physiologic events of labor and birth may have the effect of disrupting the breastfeeding relationship.

This revised policy statement from the AAP, which cites more than 200 scientific articles, is an important evidence-based resource for all maternity-care professionals, as well as those working exclusively with pediatric populations.

FIRST NATIONAL SURVEY OF DOULAS DESCRIBES THEIR BACKGROUND AND PRACTICE CHARACTERISTICS

- Lantz, P. M., Low, L. K., Varkey, S., & Watson, R. L. (2005). Doula as childbirth paraprofessionals: Results from a national survey. *Women's Health Issues, 15*(3), 109–116.

Summary

This study describes the socioeconomic characteristics, practice patterns, beliefs, and attitudes of a representative sample of doulas practicing in the United States. It is the first national survey to provide a descriptive analysis of this growing profession. The researchers surveyed a random sample of all doulas who were certified or in the process of being certified by the five major doula-certifying associations (Association of Labor Assistants and Childbirth Educators, Birth Works, Childbirth and Postpartum Professional Association, Doulas of North America, and International Childbirth Educators Association). Questionnaires were mailed to 1,000 randomly selected doulas. Surveys were completed by 626 participants, 471 of whom were

Normal birth should be the reference model for maternity care, with interventions and deviations only occurring with sound medical rationale and after consideration of potential risks and adverse outcomes.

certified doulas and 155 of whom were in the certification process. Numerical data were analyzed for basic descriptive statistics and content analysis was performed on responses to open-ended questions.

The respondents were primarily white (93.8%) and had a mean age of 40.3 years. They tended to be married (81%) and to have given birth (87.8%). High levels of household income and formal education were common, and many respondents had training as nurses, midwives, childbirth educators, or massage therapists. More than one in four respondents reported they were planning to become midwives.

Almost 80% of doulas were in solo practice, with only 3.6% working in hospital- or clinic-based practices. The doulas served an average of 11.3 prenatal clients, 9.3 labor/birth clients, and 4.1 postpartum clients within the previous year. These clients also tended to be white (84%) and married (84%), and about half were giving birth for the first time.

The respondents generally found doula work to be emotionally and personally rewarding, citing the supportive, nurturing, and empowering nature of their work and helping women have positive birth experiences as among the most satisfying aspects of their jobs. Lack of support or respect from other members of the medical team and balancing doula work with other jobs and family obligations were considered the biggest challenges. Furthermore, few doulas gained significant financial rewards for their work, with the average gross income from doula work being \$3,645. Almost 90% of doulas believed there should be third-party reimbursement for their work, but only 10% reported they had received such payment.

Significance for Normal Birth

Continuous support throughout labor and birth promotes progress and comfort in labor and

Continuous support throughout labor and birth promotes progress and comfort in labor and minimizes the need for certain medical interventions.

minimizes the need for certain medical interventions. Doulas are trained to provide this support, and their presence during labor and birth has proven beneficial in randomized controlled trials. Until now, no research has examined a representative sample of all certified doulas in the U.S. to determine who they are, how they practice, and what challenges they face. The results of this survey suggest that doulas are a relatively homogeneous population who serve a slightly more diverse clientele. The lack of financial reward for doulas and the related limited third-party reimbursement for their

services limit the accessibility of doulas to an even broader population of pregnant women who would benefit from their support. Despite this, doulas remain dedicated to their work and perceive substantial emotional rewards from their interactions with childbearing families.

AMY ROMANO is a certified-nurse midwife who cares for women and their families in a freestanding birth center in Wilmington, Delaware. She is also the Web site editor of the Lamaze Institute for Normal Birth (www.lamaze.org/institute).

Lamaze Institute for Normal Birth

Founded upon six care practices that support normal birth, the Lamaze Institute for Normal Birth is an evidence-based resource for new and expectant parents and childbirth professionals.

Together with Lamaze International, Lamaze Institute for Normal Birth believes that the following care practices, adapted from the World Health Organization (WHO), promote, support and protect nature's plan for birth:

1. Labor begins on its own
2. Freedom of movement throughout labor
3. Continuous labor support
4. No routine interventions
5. Non-supine (e.g., upright or side-lying) positions for birth
6. No separation of mother and baby after birth with unlimited opportunity for breastfeeding

Use this Web site to find credible, relevant and useful information and discover how to come together with normal birth advocates in your community.

**www.normalbirth.lamaze.org
800-368-4404**