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Putting Evidence into Practice

Oxytocin Augmentation During Labor with Epidural Analgesia

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EB CME

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Clinical Question

Does oxytocin (Pitocin) augmentation of labor in women with epidural analgesia decrease the rate of operative deliveries, or neonatal and maternal morbidity?

Evidence-Based Answer

Oxytocin augmentation does not reduce the frequency of cesarean delivery, instrumental vaginal delivery, or the combined outcome of both. Oxytocin also has no effect on low five-minute Apgar scores, postpartum hemorrhage, uterine hyperstimulation, or neonatal intensive care unit admission. (Strength of Recommendation: A, based on consistent, good-quality patient-oriented evidence.)

Practice Pointers

Many commonly practiced labor interventions aim to propel labor forward,[1,2] based on the assumption that longer labor is associated with more maternal or neonatal complications. Evidence indicates that epidural analgesia prolongs the second stage of labor and increases the frequency of instrumental deliveries.[3] Oxytocin augmentation of labor with epidural analgesia might then improve outcomes. But, does evidence support this assumption?

The authors searched the Cochrane Pregnancy and Childbirth Group's Trials Register and found two high-quality randomized controlled trials that addressed the topic. Both trials studied the effect of oxytocin augmentation on nulliparous women at different stages of labor. The first study randomized 226 fully dilated patients to oxytocin infusion (2 to 16 mU per minute) or saline.[4] Oxytocin shortened the duration of the second stage of labor (134 vs. 151 minutes; $P = .04$) and increased the rate of rotational forceps deliveries (18% vs. 9%; $P = .03$), but did not affect the rate of nonrotational deliveries, overall forceps deliveries, cesarean deliveries, or fetal outcomes. The second study randomized 93 patients who were dilated to 6 cm or less to artificial rupture of membranes and oxytocin (2 to 32 mU per minute) or to saline infusion, and evaluated the same newborn outcomes as above.[5] Oxytocin hastened completion of the first stage of labor (578 vs. 696 minutes; $P < .05$), but changed no other outcomes.

These data may have limited applicability to current U.S. practice because of the low rates of cesarean deliveries (3% and 16%) and the high rates of forceps deliveries (53% and 58%) in both trials.[4,5] In 2010, the primary cesarean delivery rate in the United States was 23.6%.[6] Currently, the rate of vacuum-assisted deliveries in the United States is about 3%, whereas the rate of forceps deliveries is 0.6%.[1] On the other hand, doses of oxytocin in the two trials were the same as those used today.[4,5]

Although oxytocin augmentation of labor with epidural analgesia appears to modestly reduce labor duration, evidence does not show other clinical benefits. In addition, recent cohort studies have shown that our assumptions about the proper speed of labor should be tempered. Spontaneous yet healthy successful labor is slower and more variable than the Friedman curve taught in medical school.[7] Augmentation of labor should thus be employed judiciously, keeping in mind the need to balance speed and diligence.

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SOURCE: Costley PL, East CE. Oxytocin augmentation of labour in women with epidural analgesia for reducing operative deliveries. *Cochrane Database Syst Rev.* 2012;5:CD009241.

The practice recommendations in this activity are available at http://summaries.cochrane.org/CD009241.

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Contraceptive Education for Women After Childbirth

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Clinical Question

Does providing women with contraceptive education within the first month postpartum reduce subsequent unintended pregnancies?

Evidence-Based Answer

Postpartum education may increase contraceptive use and reduce unplanned repeat pregnancies, although the evidence is mixed. The optimal timing and content of educational programs are not known. (Strength of Recommendation: B, based on inconsistent or limited-quality patient-oriented evidence.)

Practice Pointers

Repeat unintended pregnancy in the first year postpartum is common. This is especially true in adolescents, up to 35% of whom will become pregnant again within one year after delivery.[1] Although not all repeat pregnancies are unintended, two-thirds of postpartum women use no, or ineffective, contraception,[2] even though several effective methods are available.[3] Providing contraceptive counseling in the postpartum period is generally considered to be the standard of care. Still, it is unclear what the optimal timing and content of such counseling should be.[2] A previous Cochrane review was unable to determine which communication methods were most effective.[4]

Of the 10 trials included in this review, six were conducted in the United States; the others were from Pakistan, Nepal, Australia, and Syria. Meta-analysis was not performed because of the varied types of interventions and outcomes across studies. It is not clear what proportion of the repeat pregnancies in these studies were truly unintended. Use of contraception was a primary outcome measure of this analysis; however, no specific definition of contraceptive use or criteria for effectiveness were used.

Three studies involved one session focused on contraception only. A fourth study included contraception among a wider range of topics in either one or two sessions. Two of the four studies showed a positive effect on rates of contraceptive use. In one study, women who received counseling were more likely than those without counseling to be using contraception at eight to 12 weeks postpartum (odds ratio [OR] = 19.6; 95% confidence interval [CI], 11.7 to 32.8).[5] In the second study, women who received counseling immediately after birth were more likely than those who received no counseling, or counseling only at three months postpartum, to be using contraception at six months (OR = 1.6; 95% CI, 1.1 to 2.5).[6]

The six other studies involved interventions consisting of multiple patient contacts. Three of these studies showed positive effects on pregnancy or contraceptive use. Among the studies with positive results, observed benefits included an increased use of effective contraception at six months and fewer repeat pregnancies at 18 to 24 months.[7,8] The other three studies with multiple patient contacts failed to show a benefit.

Four studies reported pregnancy outcomes in adolescents. One study found that the education group was less likely than the control group to have a repeat pregnancy at

18 months (15% vs. 32%).[7] Another found less than half the rate of second births by two years among participants in an in-home mentoring program.[8] The other two studies found no difference in repeat births at two years.

Although the evidence is mixed, providing women with postpartum contraceptive education may increase contraceptive use and reduce repeat unintended pregnancies. Because the optimal content of that education is unclear, physicians should tailor their own practices to meet the needs of their particular patient populations.

The views expressed in this article are those of the authors and do not reflect the official policy or position of the United States government, Department of the Army, Department of the Air Force, or the Department of Defense.

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SOURCE: Lopez LM, Hiller JE, Grimes DA, Chen M. Education for contraceptive use by women after childbirth. *Cochrane Database Syst Rev.* 2012;8:CD001863.

The practice recommendations in this activity are available at http://summaries.cochrane.org/CD001863.

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