Resources for Evidence-Based Practice,
July/August 2003


This column highlights new resources that clarify knowledge about effects of specific practices in maternal/newborn and women’s health. The focus is on new and recently updated systematic reviews and overviews of best research evidence. The column identifies recent additions to three major evidence-based databases:

- **Cochrane Database of Systematic Reviews (CDSR)** uses a standardized method to review studies that evaluate effects of specific health care practices. It is a leading source of high-quality reviews.
- **Database of Abstracts of Reviews of Effects (DARE)** is a compilation of structured abstracts of quality-assessed systematic reviews. Staff at the United Kingdom National Health Service’s Centre for Reviews and Dissemination use quality criteria to determine whether a review is included and to develop abstracts.
- **Clinical Evidence** is a source of overviews of the best available research about effects of interventions. These overviews from the BMJ Publishing Group generally examine multiple questions (for example, prevention and treatment) about specific health concerns.

The column also identifies recent evidence-based research reviews from other sources, and ends with a commentary.

### COCHRANE DATABASE OF SYSTEMATIC REVIEWS (CDSR), ISSUE 1, 2003

**Featured review:** Gallo MF, Grimes DF, Schulz KF. Skin patch and vaginal ring versus combined oral contraceptives for contraception.

The objective of this review was to compare newer skin patch and vaginal ring contraceptives to oral contraceptives with respect to effects on contraceptive efficacy, cycle control, compliance, and safety. The reviewers included 3 relevant and methodologically adequate randomized controlled trials comparing skin patch and oral contraceptives, but found no eligible trials evaluating the contraceptive vaginal ring. Patch and oral contraceptives did not differ with respect to contraceptive efficacy. In the 2 trials that examined discontinuation rates, one trial found no difference whereas another found more frequent discontinuation with the patch. Just one trial evaluated adverse effects, and breast discomfort was reported more frequently with the patch. This trial was too small to evaluate possible serious rare adverse effects. One trial measured self-reported compliance, which favored patch users.

**Comment:** A small body of controlled trials has recently become available to explore possible advantages and drawbacks of the contraceptive skin patch relative to oral contraceptives. No comparable trials were identified for assessing the contraceptive vaginal ring.

### Pregnancy and Birth

**New**

- Cervical stitch (cerclage) for preventing pregnancy loss in women
- Elective delivery of women with a twin pregnancy from 37 weeks’ gestation
- Interventions for treating placental abruption
- Treatment for primary postpartum haemorrhage

**Updated**

- Calcium channel blockers for inhibiting preterm labour
- Drugs for preventing malaria-related illness in pregnant women and death in the newborn
- Hormones for suspected impaired fetal growth
- Immunotherapy for recurrent miscarriage
- Maternal nutrient supplementation for suspected impaired fetal growth
- Vaginal misoprostol for cervical ripening and induction of labour

### Women’s Health

**New**

- Diaphragm versus diaphragm with spermicides for contraception
- Human menopausal gonadotropin versus recombinant follicle stimulation hormone for ovarian stimulation in assisted reproductive cycles
- Interventions for the physical aspects of sexual dysfunction in women following pelvic radiotherapy
- Open retropubic colposuspension for urinary incontinence in women
• Single versus double intrauterine insemination (IUI) in stimulated cycles for subfertile couples

Updated
• Immediate post-partum insertion of intrauterine devices
• Interventions for vaginismus
• Psychotherapy for bulimia nervosa and binging
• Techniques for the interruption of tubal patency for female sterilisation

Newborn Care

New
• Cot-nursing versus incubator care for preterm infants
• High versus low medium chain triglyceride content of formula for promoting short term growth of preterm infants
• Inhaled versus systemic corticosteroids for preventing chronic lung disease in ventilated very low birth weight preterm neonates
• Oral immunoglobulin for the treatment of rotavirus diarrhea in low birth weight infants
• Prophylactic intravenous antifungal agents to prevent mortality and morbidity in very low birth weight infants

Updated
• Continuous nasogastric milk feeding versus intermittent bolus milk feeding for premature infants less than 1500 grams
• Delayed (>3 weeks) postnatal corticosteroids for chronic lung disease in preterm infants
• Early postnatal (<96 hours) corticosteroids for preventing chronic lung disease in preterm infants
• Elective high frequency oscillatory ventilation versus conventional ventilation for acute pulmonary dysfunction in preterm infants
• Intravenous midazolam infusion for sedation of infants in the neonatal intensive care unit
• Moderately early (7-14 days) postnatal corticosteroids for preventing chronic lung disease in preterm infants
• Prophylactic methylxanthines for extubation in preterm infants

Cochrane Reviews are available by subscription to The Cochrane Library or through various publishing partners (see http://www.update-software.com/Cochrane/). Abstracts of all Cochrane Reviews are available without charge from http://www.cochrane.org.

DATABASE OF ABSTRACTS OF REVIEWS OF EFFECTS (DARE)

Featured review: Bricker L, Lavender T. Parenteral opioids for labor pain relief: a systematic review. [Abstract 20028284]

This review was conducted to determine the safety and effectiveness of parenteral opioids for labor pain relief. Forty-eight randomized controlled trials involving over 9,800 women met reviewers’ criteria for relevance and methodologic adequacy. The reviewers found that although meperidine (pethidine) is the most commonly used opioid for labor pain relief worldwide, there are considerable concerns about both its effectiveness for labor pain relief and its potential side effects in mothers and babies. No convincing available evidence suggests that other opioids are preferable. Epidural analgesia provided pain relief superior to opioids, and many women used “rescue” epidural following inadequate relief with opioids. However, epidurals were associated with longer first- and second-stage labors, more fetal malpositions, and greater use of oxytocin augmentation and birth with vacuum extraction or forceps. Despite extensive use of opioids in labor and many available trials, additional research is needed to clarify the impact of opioids on breastfeeding and mother-infant bonding, and to compare the safety and effectiveness of opioids to non-pharmacologic and non-epidural pharmacologic methods of labor pain relief. The reviewers also identify the need for qualitative research to better understand women’s expectations, decision-making, and experiences in this area.

Comment: About 3 laboring women in 10 use parenteral opioids in the U.S. Well before labor, and again during labor, it is important to inform pregnant women about the limited effectiveness of these drugs, concerns about their risk profile, and areas of uncertainty, as well as risks and benefits of other pharmacologic methods and drug-free measures for labor pain relief.

Pregnancy and Birth

• Aspirin for the prevention of preeclampsia in women with abnormal uterine artery Doppler: a meta-analysis
• Birth defects after maternal exposure to corticosteroids: prospective cohort study and meta-analysis of epidemiologic studies
• Prophylactic use of antibiotics for nonlaboring patients undergoing cesarean delivery with intact membranes: a meta-analysis

Women’s Health

• Chemoprevention of breast cancer: a joint guideline from the Canadian Task Force on Preventive Health Care and the Canadian Breast Cancer Initiative’s Steering Committee on Clinical Practice Guidelines for the Care and Treatment of Breast Cancer
• Hormone replacement therapy and cognition: systematic review and meta-analysis
• Hormone replacement therapy and prevention of vertebral fractures: a meta-analysis of randomised trials
• A meta-analysis of estrogen replacement therapy and risk of epithelial ovarian cancer
• A meta-analysis of the Papanicolaou smear and wet mount for the diagnosis of vaginal trichomoniasis
• Preventive health care 2001 update: should women be routinely taught breast self-examination to screen for breast cancer?
• Systematic review of randomized trials of the effect of exercise on bone mass in pre- and postmenopausal women

Newborn Care

• Focal small bowel perforation: an adverse effect of early postnatal dexamethasone therapy in extremely low birth weight infants.

DARE abstracts are available without charge from: http://agatha.york.ac.uk/darehp.htm

CLINICAL EVIDENCE, ISSUE 8, DECEMBER 2002

Women’s Health

New

• Ovarian cancer [effects of treatments for ovarian cancer that is advanced at first presentation: 1. surgery, 2. cytotoxic chemotherapy; additional types of treatment will be covered in future updates]

Clinical Evidence is available in online and print versions through www.clinicalevidence.com.

EVIDENCE-BASED REVIEWS FROM OTHER SOURCES


Chlamydia trachomatis is a sexually transmitted bacterial infection associated with pelvic inflammatory disease and sequelae in women and adolescents, and with infection in newborns through vertical transmission. This systematic review was carried out to identify the most accurate diagnostic test among those currently available for detecting asymptomatic C. trachomatis infections in sexually active people to 40 years of age. The authors summarized results of 32 studies meeting criteria for both relevance and methodologic adequacy. For screening women, they considered both cervical swabs and urine samples with 1) nucleic acid amplification techniques (ligase chain reaction, and polymerase chain reaction or PCR), 2) gene probes, 3) direct fluorescent antibody test, 4) enzyme immunoassay, and 5) leucocyte esterase test (LET). With the exception of LET, the tests uniformly had high specificity, correctly identifying those without infection. However, sensitivity, correctly identifying those with infection, varied consider-ably. Use of the PCR test with urine samples was both highly accurate and non-invasive relative to other options.

Comment: Accurate screening tests help ensure that those who are screened benefit and are not harmed. Although less expensive than newer nucleic acid amplification tests, conventional tests may not detect a substantial proportion of chlamydial infections. An accurate urine sample test allows for screening under a wider variety of circumstances and in a broader range of settings than cervical swab testing and may be more acceptable to women and adolescents.


The authors carried out this systematic review to understand women’s views and experiences of ultrasound in pregnancy, exclusive of psychological variables such as anxiety or attachment, which had been examined elsewhere. They summarized results of 74 studies of various designs, which were identified through a systematic search but not assessed for quality. Most were conducted in the U.K. or U.S. Many studies found that women’s reaction to prenatal ultrasound was overwhelmingly positive due especially to visual connection with the fetus and reassurance. Views of ultrasound were, however, more mixed with findings of uncertain clinical significance or of a definite problem. Numerous studies identified women’s knowledge deficits about conditions for which caregivers were screening, and some considered and found deficits in caregivers’ provision of this information. Some studies also identified women’s need for better operator communication skills, advance guidance about what will happen during an ultrasound scan, and knowledge of limitations of ultrasound.

Comment: For the reviewers, women’s highly positive attitudes toward pregnancy ultrasound contrasted with concerns about the safety of ultrasound in the childbirth movement, issues of medicalization of the childbirth experience, and concern about appropriate use of ultrasound. Although women were generally positive, this review identified numerous ways to improve the experience, including increased attention to client education and counseling and processes of informed decision making.

Pregnancy and Birth

RevIEWS ON TOPICS OF INTEREST

COMMENTARY: FINDING SYSTEMATIC REVIEWS ON TOPICS OF INTEREST

A well-conducted systematic review of the best available research is the most definitive way to clarify the safety and effectiveness of health care practices. Systematic reviews can be identified through the databases highlighted in this column, and by searching for this type of review in leading bibliographic databases such as CINAHL, MEDLINE, and EMBASE. A number of support resources are available to aid the search process.

The Cochrane Database of Systematic Reviews (CDSR) is the premier database within The Cochrane Library,1 and there is broad consensus about the high overall quality of Cochrane Reviews. Guidance for using and searching The Cochrane Library is available through several channels: its Help button, a reference card offered by the publisher,2 training resources organized by the U.K. National Health Service Centre for Reviews and Dissemination,3 and a collaborative initiative in Australia.4

It is also possible to identify all Cochrane reviews that are available within particular clinical areas. Fifty Collaborative Review Groups have responsibility for preparing reviews in specific clinical areas and keeping them up-to-date. Groups of special interest to readers of this Journal include: Breast Cancer, Fertility Regulation, Gynaecological Cancer, Menstrual Disorders and Subfertility, Neonatal, Pregnancy and Childbirth, and Sexually Transmitted Diseases. Other groups, such as HIV/AIDS and Incontinence, prepare numerous reviews.

The Database of Abstracts of Reviews of Effects (DARE) contains abstracts of health-related systematic reviews that meet a set of quality criteria. In contrast to abstracts prepared by authors, DARE abstracts are prepared by researchers trained in critical appraisal skills at the U.K. National Health Service Centre for Reviews and Dissemination. They follow a standard format that helps DARE users understand strengths and weaknesses of individual reviews. Candidates for inclusion are identified through regular electronic searches of core databases, by hand searching a large set of core journals, and by monitoring assessments produced by technology assessment centers throughout the world. The NHS Centre for Reviews and Dissemination web site provides free access to DARE, along with a guide for searching this database and other support resources.6 DARE is also one of the databases included in The Cochrane Library, accessible through the same search functions as CDSR, noted above.

Given the impressive DARE process for identifying...
systematic reviews, is there a reason to search MEDLINE, CINAHL and other basic databases for systematic reviews? Such a search may identify reviews that are not in DARE, including both reviews that did not meet DARE quality criteria and new reviews that have not yet been entered into DARE. Quite a few explicit search strategies or “filters” have been developed to search these sources for systematic reviews.7–11 These strategies have been developed to accurately identify available systematic reviews and limit inclusion of other types of reports in search results.

REFERENCES


10. Search strategies to identify reviews and meta-analyses in MEDLINE and CINAHL. Retrieved April 15, 2003, from University of York, NHS Centre for Reviews and Dissemination Web Site: http://www.york.ac.uk/inst/crd/search.htm


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