NATIONAL COUNCIL OF CHIEF CLINICAL CONSULTANTS

CCC Corner

Focus on the Health of American Indians and Alaska Natives

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Does a PICC line facilitate treatment of hyperemesis gravidarum?

OBJECTIVE: The objective of the study was to evaluate the use of interventions such as a peripherally inserted central catheters (PICC) line or nasogastric (NG)/nasoduodenal (ND) tube with the use of medications alone in the management of pregnancies with hyperemesis.

STUDY DESIGN: Subjects were identified with confirmed intrauterine pregnancy, admitted with hyperemesis gravidarum (HEG) between 1998 and 2004. Medical records were then abstracted for information with regard to therapy. Subjects were assigned on the basis of the management plan: medication alone, PICC line, or NG/ND tube. Outcomes were compared between groups.

RESULTS: Ninety-four patients met study criteria and had complete outcome data available. Of those, 33 had a PICC line placed (35.1%), 19 had a NG/ND placed (20.2%), and 42 were managed with medication alone (44.7%). These groups were similar with respect to gestational age at delivery, Apgar score, and mean birthweight. Maternal complications were significantly higher among those with PICC lines. Of patients managed with PICC lines, 66.4% (P < .001) required treatment for infection, thromboembolism, or both. Adjusted odds ratio for a PICC line complication was 34.5 (5.09, 233.73).

CONCLUSION: Maternal complications associated with PICC line placement are substantial despite no difference in neonatal outcomes, suggesting that the use of PICC lines for treatment of HEG patients should not be routinely used.

OB/GYN CCC Editorial comment

66.4% of women managed with a PICC line required treatment for thromboembolism or infection, or both

Holmgren et al conclude that enteral feeding for women with hyperemesis gravidarum is safer than parenteral feeding and is accepted by patients. Obstetricians should make every effort to use enteral feeding for women with hyperemesis gravidarum and persistent weight loss.

For a more complete discussion about management options for hyperemesis gravidarum, please review the answer to this month's Medical Mystery Tour. Another possible resource can be found in T. Murphy Goodwin, MD's OBG Management discussion, link below.

Holmgren et al expands on the observations of previous authors who have pointed out the numerous complications of PICC line access for parenteral nutrition during pregnancy. The vast majority of such interventions during pregnancy are for the diagnosis of HEG.

That some form of nutritional supplementation is needed for women who experience persistent weight loss with hyperemesis is clear. Although it is rare, maternal mortality still does occur and comes almost exclusively from this group of women. The same is true for major maternal morbidity such as Wernicke's encephalopathy.

Fetal effects such as growth restriction are limited to women who have HEG who also lose weight. Apart from growth restriction, which can be recognizable at birth, substantial data in both

(continued on page 15)

THIS MONTH

ACOG / IHS Course in Salt Lake City, Utah this year

Obstetric, Neonatal and Gynecologic Care
September 14–18, 2008
Salt Lake City, Utah

This annual women's health update for Nurses, Advanced Practice Clinicians, and physicians provides four days of lectures, workshops, and hands-on sessions. The course is a good foundation for those who are new to women's health care or new to the Indian health system. Many faculty members are from IHS and Tribal facilities. A Neonatal Resuscitation Program is also available.

Early registration holds your place, and puts you in line for a possible scholarship.

Contact
ymalloy@acog.org

Also on-line....

Subscribe to the listserv and receive reminders about this service. If you have any questions, please contact me at nmurphy@scf.cc

Dr. Neil Murphy
Ob/Gyn–
Chief Clinical Consultant (C.C.C.)

IHS Child Health Notes

"It doesn't matter if the cat is black or white as long as it catches mice."
—Chinese Proverb

Quote of the month

"If you rest, you rust."
—Helen Hayes

Article of Interest

Cardiovascular Monitoring of Children and Adolescents with Heart Disease Receiving Medications for Attention Deficit/Hyperactivity Disorder: A Scientific Statement from the American Heart Association Council on Cardiovascular Disease in the Young Congenital Cardiac Defects Committee and the Council on Cardiovascular Nursing

Circulation 2008;117;2407-2423; originally published online Apr 21, 2008;

Cardiovascular Monitoring and Stimulant Drugs for Attention-Deficit Hyperactivity Disorder—Policy Statement of the American Academy of Pediatrics

Published online on May 28, 2008

American Academy of Pediatrics/American Heart Association Clarification of Statement on Cardiovascular Evaluation and Monitoring of Children and Adolescents with Heart Disease Receiving Medications for ADHD

Published online on June 3, 2008

In late April the American Heart Association (AHA) released new guidelines for children receiving stimulant medication for Attention Deficit Hyperactivity Disorder (ADHD) The AHA recommended that all children beginning treatment with stimulant medications, and those already on stimulant medication, should have an electrocardiogram (ECG) to search for occult heart disease that could place them at increased risk for sudden cardiac death. This recommendation caused anxiety in many parents and frustration in many psychiatrists and pediatricians.

The AHA recommendation has significant procedural and financial implications. It is estimated that 2.5 million children are receiving stimulant medication now. Obtaining an ECG on each one would entail significant costs. For some patients a further barrier was the suggestion that the ECG should be reviewed by a practitioner experienced in reading pediatric ECG. This would limit the reading of these studies to pediatric cardiologists and a small subset of pediatricians.

Within a month the American Academy of Pediatrics (AAP) fired back. The AAP published its own policy statement on stimulants and ADHD on May 28, 2008. Highlights included.

- Sudden Cardiac Death (SCD) in persons taking medications for ADHD is a rare event occurring at rates no higher than in the general population of children and adolescents
- Stimulant medication can cause mild elevations of blood pressure and heart rate but there is no evidence they increase the risk of SCD
- There is no evidence that the routine use of ECG screening before beginning medication for ADHD treatment would prevent SCD.
- Substantial evidence exists concerning the efficacy and safety of ADHD treatment with stimulant medications.
- Requiring an ECG before stimulant treatment could create a barrier to timely therapy. Limiting children's access to effective treatment for ADHD could have serious implications, because there are substantial risks of not treating ADHD.

The AAP recommended that the cardiac evaluation of children taking stimulant medication should not change from their previous policy in 2000. The recommendations were as follows:

1. The AAP continues to recommend a careful assessment of all children, including those starting stimulants, using a targeted cardiac history (e.g., patient history of previously detected cardiac disease, palpitations, syncope, or seizures; a family history of sudden death in children or young adults; hypertrophic cardiomyopathy; long QT syndrome) and a physical examination, including a careful cardiac examination.
2. Given current evidence, the AAP encourages primary care and subspecialty physicians to continue currently recommended treatment for ADHD, including stimulant medications, without obtaining routine ECGs or routine subspecialty cardiology evaluations for most children before starting therapy with these medications.

To resolve confusion between the two professional societies the AAP and AHA issued a joint statement on June 3, 2008. The relevant portion is listed below:

- Obtaining a patient and family health history and doing a physical exam focused on cardiovascular disease risk factors are recommended by the AAP and AHA for assessing patients before treatment with drugs for ADHD.
- It is reasonable for a physician to consider obtaining an ECG as part of the evaluation of children being considered for stimulant drug therapy, but this should be at the physician's judgment, and it is not mandatory to obtain one.
- Treatment of a patient with ADHD should not be withheld because an ECG is not done

Editorial Comment

The AAP statement of May 28, 2008 is reasonable guidelines that practitioners should embrace. Patients should be screened by history for potential cardiac risk factors and have a physical exam that focuses on cardiovascular system. Patients with known or suspected heart disease may need an ECG and further specialty evaluation.

Infectious Disease Updates.

Rosalyn Singleton, MD

Teen Vaccines: How are we doing?

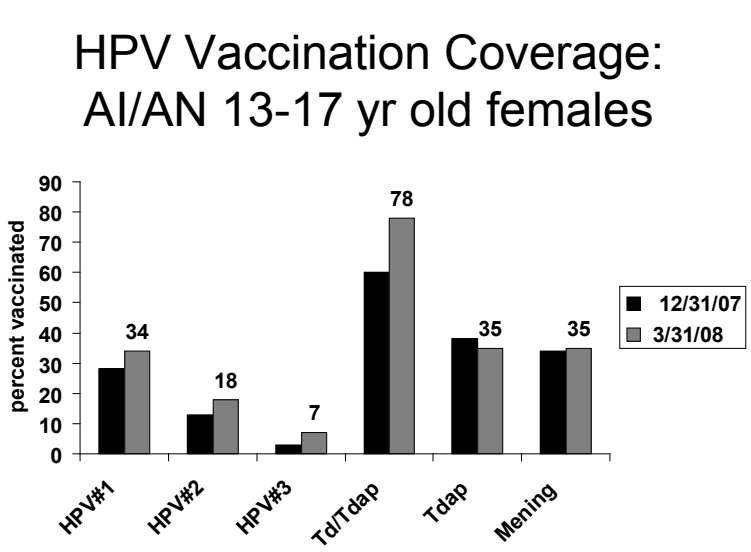
Since 2005, three new vaccines have been licensed and recommended specifically for teens: Tdap, HPV and meningococcal conjugate vaccine.

- Tdap – for 11-18 year olds with >5 years since last Td vaccine,
- HPV – 3 doses for 9-26 year old females
- Meningococcal conjugate (Menactra®, MCV4) – for 11-18 year olds

CDC published the first estimates of national vaccination coverage among teens aged 13-17 years in U.S.-2006 in Aug. 2007 http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5634a3.htm

Among 13-17 year olds, 10.8% had received 1 dose of Tdap and 60.1% had received 1 dose of Td or Tdap since age 10 years; 11% had received meningococcal vaccine. According to recent CDC data, 23% of females aged 13-17 years had received 1+ doses of HPV vaccine.

Indian Health Service started reporting Adolescent Immunization rates for American Indian and Alaska Native adolescents 13-17 years of age from IHS/contract facilities in 12/31/07. Adolescent coverage data from 12/31/07 and 3/31/08 are presented here:



Comments: The initial Indian Health Service adolescent vaccine coverage rates for new vaccines compare favorably with national coverage rates; however, the national rates reflect an earlier time period. These rates reflect a robust delivery system; however, it will be challenging to administer 2nd and 3rd doses in a timely manner to teens. Providers can pull up lists of teens due for their 2nd or 3rd HPV doses in the RPMS Immunization Package by running a list of girls who have "received HPV vaccine" and are "due for HPV vaccine".

Recent literature on American Indian/ Alaskan Native Health

Michael L. Bartholomew, MD

Murphy TV, Syed SB, Holman RC, Haberling DL, Singleton RJ, Steiner CA, Paisano EL, Cheek JE. Pertussis-Associated Hospitalizations in American Indian and Alaska Native Infants. J Pediatr. 2008;152:839-43.

Before the introduction of the pertussis vaccine in the 1940s, the US incidence of pertussis was approximately 150 cases per 100,000 population or roughly 175,000 cases per year1. By the 1980-90's the incidence declined to approximately 1 case per 100,000 population. Since 1980, the incidence of pertussis has steadily increased. Waning immunity in the adolescent and adult populations are felt to be contributing factors to this increase2.

This study investigates the burden of pertussis in American Indian and Alaska Native (AI/AN) infants from 1980 to 2004 and 2000 to 2004 through the analysis of discharge/hospitalization data from the Indian Health Service (IHS)/Tribal health care system. Infant pertussis hospitalizations were examined by sex, age group (infants less than 6 months and 6-11 months) and IHS region (Northern Plains, Southern Plains, Southwest, and Alaska). Rates of infant pertussis hospitalizations for 2000-2004 were compared to the pertussis hospitalizations of the general U.S. infant population in 2003.

In IHS, there were 483 infant pertussis hospitalizations between 1980 and 2004. This equals an annual pertussis hospitalization rate of 132.7 per 100,000 AI/AN infants (95% CI = 121.3 to 145.2). The highest numbers of hospitalizations were in infants less than 6 months of age (427 hospitalizations); equaling a rate of 234.5 per 100,000 infants. Rates in males and females were similar by age. The Southwest region had the highest rate (187.9 per 100,000) of pertussis hospitalizations as compared to Alaska (92.0), Northern Plains (103.3) and the Southern Plains (87.8).

In comparison, the average annual pertussis hospitalization rate for AI/AN between 2000 and 2004 was higher than the 2003 general US infant population pertussis hospitalization rate (100.5 vs. 67.7). Additionally, Alaska (156.9) and Southwest (130.9) regions had higher hospitalization rates than the Northern (59.1) and Southern (59.2) Plains during the same time period.

The authors concluded that the burden of pertussis is greatest in AI/AN infants less than 6 months of age predominantly those residing in the Southwest and Alaska regions. Despite levels of immunization rates equal or slightly less than the general population, environmental and social influences likely contribute to the higher disease burden in the AI/AN population; similar to what is seen with respiratory syncytial virus infections in Alaska Native infants3. Prevention of pertussis by timely administration of DTaP at 6 to 8 weeks of age and promotion of Tdap vaccination in adults and adolescents are strongly encouraged.

Reference:

1. *Centers for Disease Control and Prevention. http://www.cdc.gov/vaccines/pubs/pinkbook/downloads/pert.pdf*

2. *American Academy of Pediatrics. Pertussis. In: Pickering LK, Baker CJ, Long SS, McMillan JA, eds. Red Book: 2006 Report of the Committee on Infectious Diseases. 27th ed. Elk Grove Village, IL: American Academy of Pediatrics; 2006:498-520.*

3. *Holman RC, Curns AT, Cheek JE, Bresee JS, Singleton RJ, Carver K, Anderson LJ. Respiratory syncytial virus hospitalizations among American Indian and Alaska Native infants and the general United States infant population. Pediatrics 2004 Oct;114(4):e437-44.*

From Your Colleagues

Steve Holve, Tuba City

3rd International Meeting on Indigenous Child Health: Many Voices Into One Song

March 6-8, 2009 Albuquerque, NM

Join the Canadian Paediatric Society and the American Academy of Pediatrics, in cooperation with the Indian Health Service and the First Nations Inuit Health Branch, Health Canada, for the 3rd International Meeting on Indigenous Child Health. Child health providers and researchers dedicated to working with American Indian, Alaska Native, First Nations, Inuit, and Métis children and families are encouraged to attend. Participants will have the opportunity to share model programs and research, and develop practical skills that can be utilized in community settings.

For updated conference information, visit www.cps.ca or www.aap.org/nach. The AAP direct conference link can be found at www.aap.org/nach/3InternationalMeeting.html.

This is the third conference with the US and Canada. The past two have been terrific and this conference will also be great. Block off the time for next Spring.

Elaine Locke and Yvonne Malloy, ACOG

"For American Indians, healthcare needs grow, money doesn't"

Indian Health staff were featured in an ACOG Today article about American Indian and Alaska Native women's health care and the longstanding IHS/ACOG collaboration. The article pointed out the limited funding that IHS receives and the challenges encountered in providing care to a largely rural population with limited resources. The full front-page article, with lovely photos and quotes from several leaders in Indian Women's Health, is available at the link below:
www.ihs.gov/MedicalPrograms/MCH/F/documents/Indian%20Health%20Services%20may%2008.pdf

Haffner Native Women's Health Award

The ACOG Committee on American Indian Affairs is raising money for a new award that would recognize an individual who has made a major contribution to improving the health care of American Indians/Alaska Natives. The William H.J. Haffner American Indian/Alaska Native Women's Health Award is named after ACOG Fellow Dr. Haffner, an ob-gyn professor at the Uniformed Services University of the Health Sciences, Bethesda, MD. Dr. Haffner worked for the federal Indian Health Service for many years and has been involved with ACOG's Indian health programs since their inception.

To donate to the Haffner Award Fund, please make checks out to "ACOG" and mail to Yvonne Malloy, ACOG, 409 12th St. SW, Washington, DC 20024
www.ihs.gov/MedicalPrograms/MCH/F/documents/Indian%20health%20award.doc

ACOG/IHS Postgraduate Course on Obstetric, Neonatal and Gynecologic Care

September 14–18, 2008; Salt Lake City, Utah

This annual women's health update for Nurses, Advanced Practice Clinicians, and physicians provides a four-day schedule of lectures, workshops, hands-on sessions, and team building. The large interdisciplinary faculty collaborates to teach clinical and practical topics as they apply in Indian health settings. Many faculty members are your colleagues in IHS and Tribal facilities; private sector faculty also bring a wide range of experience providing Indian health care. Learn the latest evidence-based approaches to maternal and child health services, and share problems and solutions with your colleagues from across Indian country. The course can also serve as a good foundation for professionals who are new to women's health care or new to the Indian health system.

In addition to the basic course, you may sign up for the Neonatal Resuscitation Program, and come away with your certificate from this convenient pre-course program. The opportunity to fulfill continuing education requirements in a concentrated format is significant: With the optional NRP, we can document your participation in seven half-days of education.

Sign up early! You'll have first chance for support from your facility and coverage for your time in Salt Lake City. Getting these benefits lined up takes time, so don't delay and miss out! In addition, early registration holds your place, and puts you in line for possible availability of scholarship funds.

Watch your mail for the course brochure and registration form, or download it from here:
www.ihs.gov/MedicalPrograms/MCH/F/CN01.cfm?module=08&option=9#top

For more information on the Postgraduate Course or other Indian Health programs please contact ymalloy@acog.org; 800-673-8444, ext 2580; or visit the ACOG website, www.acog.org; under "Women's Issues," click on "Indian Health Service"

Hot Topics

Obstetrics

Antibiotic Prophylaxis for Prevention of Postpartum Perineal Wound Complications; A Randomized Controlled Trial

RESULTS: One hundred forty-seven patients were recruited for the study. Of these, 83 patients received placebo and 64 patients received antibiotics. Forty patients (27.2%) did not return for their 2-week appointment. Of the patients seen at 2 weeks postpartum, 4 of 49 (8.2%) patients who received antibiotics and 14 of 58 (24.1%) patients who received placebo developed a perineal wound complication (P=.037). There were no differences between groups in parity, incidence of diabetes, operative delivery, or third-degree compared with fourth-degree lacerations.

CONCLUSION: By 2 weeks postpartum, patients who received prophylactic antibiotics at the time of third- or fourth-degree laceration repair had a lower rate of perineal wound complications than patients who received placebo.

Duggal N, Mercado C, Daniels K, Bujor A, Caughey AB, El-Sayed YY. Antibiotic Prophylaxis for Prevention of Postpartum Perineal Wound Complications: A Randomized Controlled Trial. Obstet Gynecol. 2008 Jun;111(6):1268-1273.

CCC Editorial Comment

Avoidance of episiotomy is associated with the lowest rates of 3rd and 4th degree lacerations but does not eliminate all such events; when they happen, antibiotic prophylaxis may prevent further complications.

Gynecology

No increased risk with Misoprostol for treatment of early pregnancy failure in women with previous uterine surgery

OBJECTIVE: Misoprostol use in early pregnancy may incur a risk of uterine rupture in women with previous uterine surgery.

STUDY DESIGN: We analyzed 488 women who received misoprostol 800 microg vaginally in a study that evaluated medical and surgical management of early pregnancy failure. Subjects received a repeat misoprostol dose if expulsion was not confirmed 2 days after treatment. We compared efficacy, acceptability, and safety in subjects with a history (n = 78 women) or absence (n = 410 women) of uterine surgery, defined as cesarean delivery or myomectomy.

RESULTS: Expulsion rates after a single misoprostol dose (69% vs 72%; P = .64) and overall success at 30 days (82% vs 85%; P = .50) were comparable. Pain, bleeding, complications, and acceptability did not differ. No uterine ruptures occurred (95% CI, 0, 3.8%).

CONCLUSION: Misoprostol treatment for early pregnancy failure had similar success, acceptability, and complications in women with and without previous uterine surgery.

Chen BA, Reeves MF, Creinin MD, Gilles JM, Barnhart K, Westhoff C, Zhang J; National Institute of Child Health and Human Development Management of Early Pregnancy Failure Trial. Misoprostol for treatment of early pregnancy failure in women with previous uterine surgery. Am J Obstet Gynecol. 2008 Jun;198(6):626.e1-5. Epub 2008 Feb 15.

Child health

Obesity and type 2 diabetes risk in midadult life: the role of childhood adversity

OBJECTIVE: Child abuse has been associated with poorer physical health in adulthood, but less is known about childhood adversity more broadly, including neglect and family problems, or the pathways from adversity to adult disease. We have examined how different stressful emotional or neglectful childhood adversities are related to adiposity and glucose control in midadulthood, taking into account childhood factors, and whether the relationships are mediated by adult health behaviors and socioeconomic position.

METHODS: This was a prospective longitudinal study of 9310 members of the 1958 British birth cohort who participated in a biomedical interview at 45 years of age. Primary outcomes consisted of continuous measures of BMI, waist circumference, and glycosylated hemoglobin at 45 years and categorical indicators: total obesity (BMI > or = 30), central obesity (waist circumference: > or = 102 cm for men and > or = 88 cm for women), and glycosylated hemoglobin level of > or = 6.

RESULTS: The risk of obesity increased by 20% to 50% for several adversities (physical abuse, verbal abuse, witnessed abuse, humiliation, neglect, strict upbringing, physical punishment, conflict or tension, low parental aspirations or interest in education, hardly takes outings with parents, and father hardly reads to child). Adversities with the strongest associations with adiposity (e.g., physical abuse) tended to be associated with glycosylated hemoglobin levels of > or = 6, but in most cases associations were explained by adjustment for adulthood mediators such as adiposity. Effects of other adversities reflecting less severe emotional neglect and family environment were largely explained by childhood socioeconomic factors.

CONCLUSIONS: Some childhood adversities increase the risk of obesity in adulthood and thereby increase the risk for type 2 diabetes. Research is needed to understand the interrelatedness of adversities, the social context of their occurrence, and trajectories from adversity to adult disease.

Thomas C, Hyppönen E, Power C. Obesity and type 2 diabetes risk in midadult life: the role of childhood adversity. Pediatrics. 2008 May;121(5):e1240-9.

Chronic Illness

Intensive Glucose Control Does Not Prevent Major Cardiovascular Events in Type 2 Diabetes

Two recent studies published in the NEJM addressing intensive glucose control in adults with type 2 diabetes failed to demonstrate a decrease in major cardiovascular events, although the second study did show a decrease in nephropathy.

ACCORD Study Abstract:

BACKGROUND: Epidemiologic studies have shown a relationship between glycated hemoglobin levels and cardiovascular events in patients with type 2 diabetes. We investigated whether intensive therapy to target normal glycated hemoglobin levels would reduce cardiovascular events in patients with type 2 diabetes who had either established cardiovascular disease or additional cardiovascular risk factors.

METHODS: In this randomized study, 10,251 patients (mean age, 62.2 years) with a median glycated hemoglobin level of 8.1% were assigned to receive intensive therapy (targeting a glycated hemoglobin level below 6.0%) or standard therapy (targeting a level from 7.0 to 7.9%). Of these patients, 38% were women, and 35% had had a previous cardiovascular event. The primary outcome was a composite of nonfatal myocardial infarction, nonfatal stroke, or death from cardiovascular causes. The finding of higher mortality in the intensive-therapy group led to a discontinuation of intensive therapy after a mean of 3.5 years of follow-up.

RESULTS: At 1 year, stable median glycated hemoglobin levels of 6.4% and 7.5% were achieved in the intensive-therapy group and the standard-therapy group, respectively. During follow-up, the primary outcome occurred in 352 patients in the intensive-therapy group, as compared with 371 in the standard-therapy group (hazard ratio, 0.90; 95% confidence interval [CI], 0.78 to 1.04; P=0.16). At the same time, 257 patients in the intensive-therapy group died, as compared with 203 patients in the standard-therapy group (hazard ratio, 1.22; 95% CI, 1.01 to 1.46; P=0.04). Hypoglycemia requiring assistance and weight gain of more than 10 kg were more frequent in the intensive-therapy group (P<0.001).

CONCLUSIONS: As compared with standard therapy, the use of intensive therapy to target normal glycated hemoglobin levels for 3.5 years increased mortality and did not significantly reduce major cardiovascular events. These findings identify a previously unrecognized harm of intensive glucose lowering in high-risk patients with type 2 diabetes.

The Action to Control Cardiovascular Risk in Diabetes Study Group. Effects of Intensive Glucose Lowering in Type 2 Diabetes. N Engl J Med. 2008 Jun 12;358(24):2545-2559. Epub 2008 Jun 6.

ADVANCE Study Abstract:

BACKGROUND: In patients with type 2 diabetes, the effects of intensive glucose control on vascular outcomes remain uncertain. METHODS: We randomly assigned 11,140 patients with type 2 diabetes to undergo either standard glucose control or intensive glucose control, defined as the use of gliclazide (modified release) plus other drugs as required to achieve a glycated hemoglobin value of 6.5% or less. Primary end points were composites of major macrovascular events (death from cardiovascular causes, nonfatal myocardial infarction, or nonfatal stroke) and major microvascular events (new or worsening nephropathy or retinopathy), assessed both jointly and separately.

RESULTS: After a median of 5 years of follow-up, the mean glycated hemoglobin level was lower in the intensive-control group (6.5%) than in the standard-control group (7.3%). Intensive control reduced the incidence of combined major macrovascular and microvascular events (18.1%, vs. 20.0% with standard control; hazard ratio, 0.90; 95% confidence interval [CI], 0.82 to 0.98; P=0.01), as well as that of major microvascular events (9.4% vs. 10.9%; hazard ratio, 0.86; 95% CI, 0.77 to 0.97; P=0.01), primarily because of a reduction in the incidence of nephropathy (4.1% vs. 5.2%; hazard ratio, 0.79; 95% CI, 0.66 to 0.93; P=0.006), with no significant effect on retinopathy (P=0.50). There were no significant effects of the type of glucose control on major macrovascular events (hazard ratio with intensive control, 0.94; 95% CI, 0.84 to 1.06; P=0.32), death from cardiovascular causes (hazard ratio with intensive control, 0.88; 95% CI, 0.74 to 1.04; P=0.12), or death from any cause (hazard ratio with intensive control, 0.93; 95% CI, 0.83 to 1.06; P=0.28). Severe hypoglycemia, although uncommon, was more common in the intensive-control group (2.7%, vs. 1.5% in the standard-control group; hazard ratio, 1.86; 95% CI, 1.42 to 2.40; P<0.001).

CONCLUSIONS: A strategy of intensive glucose control, involving gliclazide (modified release) and other drugs as required, that lowered the glycated hemoglobin value to 6.5% yielded a 10% relative reduction in the combined outcome of major macrovascular and microvascular events, primarily as a consequence of a 21% relative reduction in nephropathy.

The ADVANCE Collaborative Group. Intensive Blood Glucose Control and Vascular Outcomes in Patients with Type 2 Diabetes. N Engl J Med. 2008 Jun 12;358(24):2560-2572. Epub 2008 Jun 6.

Features

ACOG

American College of Obstetricians and Gynecologists

Medical Management of Ectopic Pregnancy

OVERVIEW: In the United States, ectopic pregnancy accounts for 2% of all first-trimester pregnancies and 6% of all pregnancy-related deaths; it is the leading cause of maternal death in the first trimester. Early detection of ectopic pregnancy can lead to successful management without surgery. Methotrexate, a folic acid antagonist, can be used successfully to treat early, nonruptured ectopic pregnancy. The purpose of this document is to review the risks and benefits of the use of methotrexate in the management of ectopic pregnancy.

Summary of Recommendations and Conclusions:

The following conclusion is based on good and consistent evidence (Level A):

- In comparing systemic methotrexate with tube-sparing laparoscopic surgery, randomized trials have shown no difference in overall tubal preservation, tubal patency, repeat ectopic pregnancy, or future pregnancies.

The following recommendations and conclusions are based on limited or inconsistent evidence (Level B):

- An increase in serum hCG of less than 53% in 48 hours confirms an abnormal pregnancy.
- With an hCG level of 5,000 mIU/mL or higher, multiple doses of methotrexate may be appropriate.
- Methotrexate can be considered in those women with a confirmed, or high clinical suspicion of, ectopic pregnancy who are hemodynamically stable with an unruptured mass.
- Failure of the hCG level to decrease by at least 15% from day 4 to day 7 after methotrexate administration is considered treatment failure requiring therapy with either additional methotrexate administration or surgical intervention.
- Posttreatment hCG levels should be monitored until a nonpregnancy level is reached.

The following conclusion is based primarily on consensus and expert opinion (Level C):

- If the initial hCG level is less than 200 mIU/mL, 88% of patients experience spontaneous resolution.

ACOG Practice Bulletin No. 94: Medical Management of Ectopic Pregnancy. Obstet Gynecol 2008 111: 1479-1485.

Ethical Issues in Genetic Testing

ABSTRACT: Genetic testing is poised to play an increasing role in the practice of obstetrics and gynecology. To assure patients of the highest quality of care, physicians should become familiar with the currently available array of genetic tests and the tests' limitations. Clinicians should be able to identify patients within their practices who are candidates for genetic testing. Candidates will include patients who are pregnant or considering pregnancy and are at risk for giving birth to affected children as well as gynecology patients who, for example, may have or be predisposed to certain types of cancer. The purpose of this Committee Opinion is to review some of the ethical issues related to genetic testing and provide guidelines for the appropriate use of genetic tests by obstetrician–gynecologists. Expert consultation and referral are likely to be needed when obstetrician–gynecologists are confronted with these issues.

ACOG Committee Opinion No. 410: Ethical Issues in Genetic Testing. Obstet Gynecol 2008 111: 1495-1502.

Direct-to-Consumer Marketing of Genetic Testing

ABSTRACT: Marketing of genetic testing, although similar to direct-to-consumer advertising of prescription drugs, raises additional concerns and considerations. These include issues of limited knowledge among patients and health care providers of available genetic tests, difficulty in interpretation of genetic testing results, lack of federal oversight of companies offering genetic testing, and issues of privacy and confidentiality. Until all of these considerations are addressed, direct or home genetic testing should be discouraged because of the potential harm of a misinterpreted or inaccurate result.

ACOG Committee Opinion No. 409: Direct-to-Consumer Marketing of Genetic Testing. Obstet Gynecol 2008 111: 1493-1494.

Professional Liability and Gynecology-Only Practice

ABSTRACT: Fellows of the American College of Obstetricians and Gynecologists may choose to limit the scope of their practices to gynecology. The College considers early pregnancy care (often up to 12–14 weeks of gestation) to be within the scope of gynecology and gynecologic practice. Liability insurers who provide coverage for "gynecology-only" practices should provide coverage for clinical practice activities that involve the management of early pregnancy and its complications.

ACOG Committee Opinion No. 408: Professional Liability and Gynecology-Only Practice. Obstet Gynecol 2008 111: 1491.

New interactive site for clinicians serving women with disabilities

ACOG has released a recorded slide program, Reproductive Health Care for Women with Disabilities, which assists women's health care clinicians with office skills to assist with their care of women with physical, developmental or sensory disabilities giving specific information for reproductive health

Resources and Guidance for Fatherhood Programs (10 Promising Practices)

An increasing number of programs focus on improving fathers' involvement with children and families. What features of fatherhood programs really matter? A new National Responsible Fatherhood Clearinghouse brief authored by Child Trends examines experimental evaluations of fatherhood and parenting programs to identify ten promising practices:

- Teaching methods and materials that are culturally appropriate for fathers being served.
- Staff members who believe in the program and have relevant training and coaching.
- A high staff-participant ratio.
- One-on-one relationships between staff and participants.
- Clear, specific program goals.
- Theory-based approaches that have influenced parenting behaviors in other contexts.
- Varied teaching methods that focus on fathers as individuals.
- Sufficient time to complete important core program activities.
- Incentives to engage fathers and families.

Above are 9 of the 10 Promising Practices.
Please go to this link to learn about the 10th Promising Practice and more details
www.fatherhood.gov/statistics/index.cfm#nrfc

Additional resources at:
http://www.childtrends.org/
http://www.fatherhood.gov/

care. Available now are the first 2 parts of a six part series:

Part 1 includes an overview of the program, The Scope of Disability in Women, Sexuality, and Psychosocial Issues.

Part 2 includes The GYN Examination and GYN Health Screening.

This program was recorded by Raymond L Cox, Jr., MD, MBA, FACOG and Caroline Signore, MD, MPH, FACOG. Elisabeth Quint, MD, FACOG served as faculty chair.
http://streaming.acog.org/WomenWithDisabilities/

AHRQ

Agency for Healthcare Research and Quality

"Real Men Wear Gowns"

The Agency for Healthcare Research and Quality (AHRQ) has joined with the Advertising Council to launch a national public service campaign designed to raise awareness among middle-aged men about the importance of preventive medical testing. The new campaign—"Real Men Wear Gowns"—tells men over 40 to learn which preventive screening tests they need to get and when they need to get them. According to AHRQ's Medical Expenditure Panel Survey, men are 25 percent less likely than women to have visited the doctor within the past year and are 38 percent more likely than women to have neglected their cholesterol tests. Data from the Centers for Disease Control and Prevention indicate that men are 1.5 times more likely than women to die from heart disease, cancer, and chronic lower respiratory diseases.

The campaign encourages men to visit a comprehensive Web site, www.ahrq.gov/realmen/. The site provides the recommended ages for preventive testing (as well as a list of tests), a quiz designed to test knowledge of preventive health care, tips for talking with the doctor, a glossary of consumer health terms, and links to online resources where men can find more medical information.

Behavioral Health Insights

Peter Stuart, IHS Psychiatry Consultant

Chronic Pain Management 101—Saying *No* to Patients

Vignette: Ms. Howard has been followed in your clinic for several years for a variety of complaints including chronic neck and arm pain. She has a history of rotator cuff surgery which did not improve substantially her pain status. Her rehab participation could be characterized by the words "erratic to none." She also has a history of periodic drinking episodes, depression and several overdoses while intoxicated, and previous tolerance development to narcotics and drug-seeking behavior. She is involved in a chaotic relationship. You do believe she has some physiologic basis for her pain but her compliance with your recommendations is erratic at best and you have on several occasions assisted her in detoxing from narcotics only to have her go to another provider and be restarted on them. She can be quite dramatic when claiming to suffer from pain and has accused you previously of "not doing enough to help me with my pain." She is also on an antidepressant and gabapentin and cannot tolerate NSAIDs due to GI complications. You have a pain contract in place.

She presents today telling you she needs a refill of her Percocet 1 week before they were supposed to run out. She has been taking "1 or 2 extra a day because I was cleaning house last week and twisted my shoulder again." She has a fairly recent history of prior "lost meds" that she has been counseled on in line with the pain treatment contract she signed. She appears mildly anxious and exhibits some discomfort with the shoulder even when non-obtrusively observed. The daily quantity is sufficient enough that you are concerned about withdrawal symptoms.

(At this point most providers start grinding their teeth) How do you approach her? Turf her to the psychiatrist or chronic pain committee (if you're fortunate enough to have either?) What about her current needs?

In the murky world of real human beings, this amalgam of physical, social and emotional issues is not uncommon. The patient is likely to genuinely need some type of pain management, but is clearly out of control of her life and her self-care. She has demonstrated concerning tolerance development and there certainly is an addiction component active. She is clearly stepping outside of the boundaries set by the treatment contract. What is a reasonable goal here? Do we, as providers, have a commitment to provide compassionate and effective care no matter what the circumstances? If so, what exactly does that look like in this case? Is the

appropriate overall approach "Harm Reduction" or "Abstinence-Based" or something else?

For me in situations like this it is helpful to go back to some basic clinical principles: First, that the overall clinical situation always trumps any absolute clinical rules about specific issues (i.e. if the pain contract says "no more meds after you lose an RX"). Borrowing a little from rabbinic tradition, each patient presents a unique set of predispositions, current symptoms and possible outcomes that require the provider to exercise discernment and judgment in determining what the appropriate course of action is.

For this patient, that means understanding that my goal is long-term pain relief and life management – the path I'm looking for keeps the patient in my practice, but also provides enough incentive for her to make some necessary changes for her benefit. Second, sometimes the right answer is "No". As physicians, the principles of beneficence and minimal malfeasance are in play here. She is presenting in a situation where contingency management can be helpful in shifting behavior. In this case it might be worth using the positive contingency of getting her pain meds to decrease her discomfort both from withdrawal symptoms and pain in order to get her attending rehab and counseling. The challenge here is often a systems one – lack of access to these services at the time of presentation. **If the system is broken and doesn't work well – it is incredibly important to acknowledge that reality.**

An appointment in rehab is available in 3 days time. In order to involve her in the process you negotiate with her to walk to rehab, schedule the appointment in person, and return to your office at which time you will provide her with an Rx for the 3 days. Further refills will be contingent on showing up at rehab and will be filled after she has her rehab appointment. Here is where saying "no med refill until . . ." can be very important.

Alternatively, you believe the big issue here is that she is not managing her meds appropriately (she is not following the contract, you have given her prior "chances" to learn the system, the system has done its part by providing her with the full Rx when she comes in, and is available to her if she has been debating about increasing her dose at home). In this case, the challenge becomes saying "No" without breaking the treatment relationship.

Third, "No" can be said in a supportive way. The principles for saying "No" in a supportive way are as follows: 1) Start with empathizing and putting yourself in the patient's shoes, for example "I hear from what you're saying and can see by looking at you that you are very uncomfortable right now, and I'm guessing you're also worried about what withdrawal is going to be like if you don't get something. Is that close to what's going on?" 2) Align yourself alongside the patient and look at the problem together and the potential consequences of different approaches together, for example "Help me look at the options from your perspective. First option – I just refill the meds, no further questions asked, what happens then? And after that? And what's happened before when we've done that? And how was that experience? Second option – I tell you no more meds . . . (repeat) Third option – can you think of a third option? " 3) Summarize the options preferably using similar language to the patient, 4) tell the patient what you personally are comfortable doing and why, and 5) acknowledge that the patient may angry, frustrated, annoyed, scared, etc. and that you appreciate and understand that response and will continue working with them on their care.

Part 4 is the most difficult part because it is where you may be choosing an option different than the one the patient prefers. It is very important to be prepared for strong reactions. In Ms. Howard's case she initially tells you to "F*** off – I'll just go somewhere else then." You reply, "Yes, I think I'd be upset and scared too, and at the same time I hope you will continue to work with me." If the strong feelings can be safely tolerated and tested with the patient you have just successfully improved the relationship bond with the patient and the ability of the patient to tolerate further conflict with you – for the best interest of the patient.

In summary, the key ingredients here are an ability to see the big picture with the patient, to align yourself alongside the patient rather than against, and to support movement towards health sometimes by setting firm limits and boundaries but always in a context of compassion and caring. What else does this approach require? Time and focused attention . . .and if you can't hold the system accountable for providing these basic human needs, you're not going to get far in holding the patient accountable.

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Chronic Illness

Light and Melatonin May Reduce Dementia Symptoms

Resynchronizing patients' circadian rhythms with light and melatonin may have a "modest benefit" on their dementia symptoms.

CONCLUSIONS: Light has a modest benefit in improving some cognitive and noncognitive symptoms of dementia. To counteract the adverse effect of melatonin on mood, it is recommended only in combination with light.

Riemersma-van der Lek RF, Swaab DF, Twisk J, Hol EM, Hoogendijk WJ, Van Someren EJ. Effect of bright light and melatonin on cognitive and noncognitive function in elderly residents of group care facilities: a randomized controlled trial. JAMA. 2008 Jun 11;299(22):2642-55.
www.ncbi.nlm.nih.gov/pubmed/18544724

Obstetrics

Cochrane Review:
Dietary advice in pregnancy for preventing GDM

BACKGROUND: Gestational diabetes mellitus (GDM) is a form of diabetes that occurs during pregnancy which can result in significant adverse outcomes for mother and child both in the short and long term. The potential for adverse outcomes, in addition to the increasing prevalence of gestational diabetes worldwide, demonstrates the need to assess strategies, such as dietary advice, that might prevent gestational diabetes.

AUTHORS' CONCLUSIONS: While a low glycaemic index diet was seen to be beneficial for some outcomes for both mother and child, results from the review were inconclusive. Further trials with large sample sizes and longer follow up are required to make more definitive conclusions. No conclusions could be drawn from the high-fibre versus control-diet comparison since the trial involved did not report on many of the outcomes we prespecified.

Tieu J, Crowther CA, Middleton P. Dietary advice in pregnancy for preventing gestational diabetes mellitus. Cochrane Database Syst Rev. 2008 Apr 16;(2):CD006674.

Breastfeeding
Suzan Murphy, PIMC

A new look at what works to support breastfeeding in hospitals

June 13, 2002, Centers for Disease Control and Prevention (CDC) published in its weekly Morbidity and Mortality Weekly Report (MMWR), "Breastfeeding-Related Maternity Practices at Hospitals and Birth Centers—United States, 2007." The article is the result of the first national Maternity Practices in Infant Nutrition and Care (mPINC—called "m-pink") survey. The survey used questions from 7 categories of practice that are known to support breastfeeding, such as those found in the Ten Steps for Baby Friendly Hospitals. The categories and typical questions were:

1. Labor and delivery – Do mothers and newborns routinely experience skin-to-skin contact and early breastfeeding initiation?
2. Breastfeeding assistance – Is assessment, recording and instruction provided to new families on infant feeding? For example, are pacifiers not provided to breastfeeding infants?
3. Mother- newborn contact – Is the separation of mother and newborn avoided?
4. Newborn feeding practices – What and how breastfed babies are fed while in the hospital or birthing center? For example, is supplementation common and why?
5. Breastfeeding support after discharge – Are resources provided for the new family when they are discharged? Where can they go for assistance if problems or concerns arise?
6. Nurse/birth attendant breastfeeding training and education – What kind of breastfeeding support training and on-going education does staff receive?
7. Structural and organizational factors related to breastfeeding –
   a. Does the facility have a breastfeeding policy and how is it communicated to staff?
   b. Is there support for breastfeeding employees?
   c. Does the facility receive free infant formula?
   d. Is prenatal breastfeeding education available?
   e. Is there coordination of lactation care?

The survey was mailed to 3,143 hospitals and 138 birth centers—of these, 2,690 hospitals and 121 birthing centers responded. The survey was structured to be completed by the person most knowledgeable of the facility's intra-partum practices related to breastfeeding. To encourage true answers to survey questions, the responders and their administration were assured that their location and name would be kept confidential. The only potential identifier was the name of the state where the facility was located. The data was summarized by state and region.

The results of the survey were based on a maximum score of 100. For each category from above, the mean subscale scores from highest to lowest was:

80 2. Breastfeeding assistance
77 4. Newborn feeding practices
70 3. Mother-newborn contact
66 7. Structural and organizational factors related to breastfeeding
60 1. Labor and delivery
51 6. Nurse/birth attendant breastfeeding training and education
40 5. Breastfeeding support after discharge

State survey results strongly correlated with their breastfeeding prevalence rates. This suggests that where there are more evidenced-based breastfeeding support maternity practices in place, there are positive impacts on breastfeeding. Unfortunately, the reverse is also true.

For more information the survey project and survey questions, please see **www.cdc.gov/mmwr**

June 13, 2008/vol 57/No. 23, and www.cdc.gov/mpinc

CDC, Breastfeeding-Related Maternity Practices at Hospitals and Birth Centers --- United States, 2007 MMWR Weekly, June 13, 2008 / 57(23);621-625.

Family Planning

Injectable contraception: what should the longest interval be for reinjections?

RESULTS: The analysis consists of 2290 participants contributing 13,608 DMPA intervals. The pregnancy risks per 100 women-years for "on time" [0.6; 95% confidence interval (CI), 0.33-0.92], "2-week grace" (0.0; 95% CI, 0.0-1.88) and "4-week grace" (0.4; 95% CI, 0.01-2.29) injections were low and virtually identical.

CONCLUSION: Extending the current WHO grace period for DMPA reinjection from 2 to 4 weeks does not increase pregnancy risk and could increase contraceptive continuation.

Steiner MJ, Kwok C, Stanback J, Byamugisha JK, Chipato T, Magwali T, Mmiro F, Rugpao S, Sriplienchan S, Morrison C. Injectable contraception: what should the longest interval be for reinjections? Contraception. 2008 Jun;77(6):410-4. Epub 2008 Apr 10.

Depo Now: preventing unintended pregnancies among adolescents and young adults

PURPOSE: We compared the immediate administration of DMPA (Depo Now) to the immediate use of short-term hormonal methods that served as a "bridge method" until later DMPA initiation. We examined whether Depo Now, as compared to initiating with a bridge method (pills, transdermal patch, or vaginal ring), resulted in greater DMPA continuation at six months. METHODS: Young women aged 14 to 26 years seeking to use DMPA were randomized (nonblinded) after meeting eligibility criteria to either the Depo Now (n = 101) or bridge method (n = 232) group. Depo Now subjects received their first injection of DMPA at the conclusion of their first visit provided each was medically suitable and had a negative urine pregnancy test regardless of menstrual cycle day. Those assigned to the bridge method group were allowed to choose their starting contraceptive method and it was provided at the first visit. All subjects were told to return to the clinic in 21 days to repeat the urine pregnancy test, and among those who were assigned to use a bridge method, to receive their first injection of DMPA. All subjects were followed to their third injection, or about 6 months later.

RESULTS: Those randomized to a bridge method were 1.8 (1.1, 2.9) times more likely than Depo Now subjects to return for their 21-day repeat pregnancy test, but only 55% (n = 125) of these young women actually received their first DMPA injection. Continuation rates at the third injection were 29.7% (n = 30) for those in the Depo Now group and 21.1% (n = 49) for those assigned to the bridge method (p = .09). Three factors were significantly associated with adherence to the third injection: randomized to Depo Now group, knowing more women who use DMPA, and returning to clinic for the 21-day repeat pregnancy test visit. Finally, 28 pregnancies were diagnosed during the study period, and those in the bridge method group were almost 4.0 (1.2, 13.4) times more likely to be diagnosed with a pregnancy than those in the Depo Now group. CONCLUSIONS: Immediate administration of DMPA is associated with improved adherence to DMPA continuation and fewer pregnancies.

Rickert VI, Tiezzi L, Lipshutz J, León J, Vaughan RD, Westhoff C. Depo Now: preventing unintended pregnancies among adolescents and young adults. J Adolesc Health. 2007 Jan;40(1):22-8.

CCC Editorial Comment

The first article provides reassurance that a woman who is late, even as late as four weeks, for her scheduled Depo-Provera injection faces a low risk of unintended pregnancy and should receive the next injection without additional barriers. The second article provides more support for a "quick start" approach to Depo-Provera initiation. A "quick start" protocol can also be used for resuming Depo Provera use for those who are more than 2 to 4 weeks past the recommended date for their next dose.

Frequently asked questions

Progesterone for the Prevention of Recurrent Spontaneous Preterm Birth

Q My patient is asymptomatic with a documented history of one prior spontaneous preterm birth at 33 weeks who is now 18 weeks gestation by a good LMP and an ultrasound at 12 weeks. Should she be give progesterone therapy?

A Yes, but first make sure she agrees to return for weekly till 36 weeks of pregnancy.

Background

The incidence of preterm birth has risen progressively over the last decade from 9% to 12% of all births in the United States. Preterm birth is the second leading cause of infant mortality in this country and a significant proportion of survivors have residual disabilities. Despite multiple trials of tocolytics, antibiotics, and other preventive strategies, no effective method of preventing preterm birth has been found.

Recently, prophylactic treatment of high risk women with a history of one or more prior spontaneous preterm births with progestational compounds have demonstrated efficacy (1, 2). A prior meta-analysis (3) has also demonstrated a significant reduction in the rate of preterm delivery with the use of 17 alpha hydroxyprogesterone caproate (17P). The American College of Obstetrics and Gynecology (ACOG) has recommended that when progesterone is used, it be restricted to women with a documented history of a previous spontaneous birth at less than 37 weeks of gestation (4). Extensive experience with progesterone has shown it not to be a teratogen (5), and its use in this protocol will not involve administering it during organogenesis in the first trimester.

Child Health

Hypothermia therapy after traumatic brain injury in children does not improve neurologic outcomes and may increase mortality

BACKGROUND: Hypothermia therapy improves survival and the neurologic outcome in animal models of traumatic brain injury. However, the effect of hypothermia therapy on the neurologic outcome and mortality among children who have severe traumatic brain injury is unknown.

METHODS: In a multicenter, international trial, we randomly assigned children with severe traumatic brain injury to either hypothermia therapy (32.5 degrees C for 24 hours) initiated within 8 hours after injury or to normothermia (37.0 degrees C). The primary outcome was the proportion of children who had an unfavorable outcome (i.e., severe disability, persistent vegetative state, or death), as assessed on the basis of the Pediatric Cerebral Performance

CONCLUSIONS: In children with severe traumatic brain injury, hypothermia therapy that is initiated within 8 hours after injury and continued for 24 hours does not improve the neurologic outcome and may increase mortality.

Hutchison JS, et al. Hypothermia therapy after traumatic brain injury in children. N Engl J Med. 2008 Jun 5;358(23):2447-56.

As a referral center, ANMC renders care to a large number of women who have experienced preterm birth, and an effective preventive treatment would be most advantageous to this population. Referral of these women and/or their infants to Level III centers for delivery and prolonged level III newborn intensive care generates significant expenditures for the institution that could be avoided by prevention of the problem.

Eligible Patients:

1) Asymptomatic women with a documented history of one or more prior spontaneous preterm births (less than 35 weeks gestation) who are identified prior to 20 weeks gestation, who are dated by ultrasound prior to 20 weeks, and who agree to return for weekly injections from 16 weeks (may enroll up to 20 weeks) to 36 weeks of pregnancy.
2) Consult with Maternal Fetal Medicine to establish eligibility and monitor outcomes.

Ineligible Patients:

1) Women with a history of prior preterm birth due to a known cause such as a uterine malformation or cervical insufficiency requiring cervical cerclage.
2) Women who present with symptoms of preterm labor (symptomatic uterine contractions, short cervix on ultrasound, uterine bleeding, ruptured membranes) after 20 weeks gestation.
3) Women with a multi-fetal gestation.
4) Women with a known fetal anomaly.
5) Women with a prior indicated preterm birth (as a result of severe preeclampsia, placenta previa, fetal demise, or threatening maternal medical illness).

Drug Treatment Protocol:

1) Weekly intramuscular injection of 17-hydroxyprogesterone caproate (17P) 250 mg* from 16 through 36 weeks of gestation.
2) Fetal growth ultrasounds every 4 weeks while the patient is being treated.

Outcomes for Quality Assurance:

1) Incidence of preterm birth prior to 35 weeks.
2) Infant weights and Apgar scores.
3) Incidence of preterm labor requiring inpatient treatment but not resulting in preterm birth.
4) Any adverse maternal effects while receiving the therapy.

CCC Editorial Comment

Short cervix, multiple gestation, preterm labor

There is as yet no consistent evidence that this drug is effective in women with preterm labor, a short cervix, or other high risk conditions (6). On the other hand, progesterone supplementation did NOT reduce the rate of preterm birth in multiple gestations randomly assigned to receive this therapy (7).

References:

*Online—*Available through many pharmacies as 10mL vials (250mg/mL) at a cost of approximately $120/vial (if >6 vials are ordered). Be sure to check out availability before you discuss the possible therapy with your patient.*

International Health Update

Claire Wendland, Madison, WI

New evidence on lead's long-term effects

Lead has been back in the news lately. A potent neurotoxin, lead damages the brain by altering neurotransmitter release in a way that leads to accelerated apoptosis (cell death). It is a known toxin for adults, but appears to be a particularly bad actor in the developing brain. Though it hasn't typically been a problem in the rural parts of Indian country, urban AI/AN people living in dilapidated housing stock are at risk for chronic lead toxicity. Two new articles based on longitudinal research from the Cincinnati Lead Study (CLS) may heighten the stakes of the debate over acceptable childhood lead levels.

The CLS birth cohort was recruited in the womb between 1979 and 1984 from urban inner-city neighborhoods known to have high lead levels. These children got detailed exposure histories from the prenatal period on, frequent neuropsychiatric exams and serum lead levels, and have now been followed into young adulthood. One of the two new reports shows a small but significant correlation between childhood lead levels and adult arrest records in this cohort. After careful adjusting for potential confounders, John Wright and colleagues found that for every 5 mcg/dl increase in prenatal (maternal) and childhood blood lead, total arrests and arrests for violent crime went up by roughly forty percent. In the second report, Kim Cecil and colleagues used MRI to assess brain volume in 157 members of the CLS cohort. Regression analysis demonstrated a linear dose-dependent correlation between childhood serum lead levels and reduction in adult brain volume, a result that was highly statistically significant. Most interesting, the reduction was specific to grey matter in the anterior cingulate cortex and portions of the prefrontal cortex. (White matter and CSF volume were not

affected.) These are the regions responsible for judgment, focusing attention, regulation of mood, and executive functions. Grey-matter volume loss in these areas was also much more pronounced among men than women, even at similar lead levels. This finding suggests a mechanism for the links previously explored between childhood lead exposure and adult anti-social behavior, criminal activity, and poor intellectual performance.

Some of you may be scratching your heads over why this is an international health problem. Unfortunately, the measures put in place to mitigate lead toxicity in the United States years ago – screening programs, mandated transitions to unleaded gasoline, abolition of lead-based paints and ceramic glazes – never happened in much of the Third World. In fact, some gasoline sold today in South America, the Middle East and Africa has more lead additives than leaded gas in our country ever did; paint sold for residences, toys, and playground equipment still contains high levels of lead in Africa and several countries in Asia. In Central and South America, unregulated industrial processes are the major culprits. Some experts argue that an unrecognized epidemic of low- to moderate-level lead poisoning is occurring in much of the Third World, and a few small pilot studies of lead levels tend to confirm this assessment. Improvements in screening, policy and enforcement are urgent.

Cecil KM et al. Decreased brain volume in adults with childhood lead exposure. PLoS Medicine 5(5):e112, 2008

Wright JP et al. Association of prenatal and childhood blood lead concentrations with criminal arrests in early adulthood. PLoS Medicine 5(5):e101, 2008

Medical Mystery Tour

A diabetic patient who is finally losing weight

As you may recall last month we discussed…

…a 21 yo G1 P0 presents with persistent nausea and vomiting for 7 weeks. The patient was diagnosed with type 2 diabetes 4 years ago and has had fair control with and an oral hypoglycemic agent. She stopped her hypoglycemic when she learned she was pregnant. Her glucose has been well controlled with diet and exercise during her pregnancy. The patient has a history of migraine that often presents with concomitant nausea.

Exam reveals a 7 % loss from her pre-pregnancy body weight which she states was without trying to lose weight. Otherwise the patient's fundus is palpable 3 fingerbreadths below her umbilicus.

Laboratory evaluation reveals no evidence of urinary tract infection, but she does have ketonuria.

Ultrasound confirms a single 16 week female fetus with normal amniotic fluid and a Grade I anterior fundal placenta.

We established that pregnancy is not an ideal time for weight loss. Significant weight loss should be confined to the preconception and postpartum periods, but still had these two questions:

To review:

- Some degree of nausea with or without vomiting occurs in most pregnancies, typically with onset at five to six weeks of gestation, then peaking at nine weeks, and usually abating by 16 to 18 weeks of gestation. Hyperemesis gravidarum represents the severe end of the spectrum of symptoms.
- The diagnosis of hyperemesis gravidarum is made clinically in a woman with onset of persistent vomiting accompanied by weight loss exceeding 5 percent of prepregnancy body weight and ketonuria in the first trimester, unrelated to other causes.
- The standard initial evaluation of pregnant women with persistent vomiting includes measurement of weight, orthostatic blood pressures, serum free T4 concentration, serum electrolytes, urine ketones, and an ultrasound examination to exclude gestational trophoblastic disease and multiple gestation.

#1 What are some of the treatment options for this patient?

Here are some basic treatment recommendations

- Women who are significantly dehydrated should receive intravenous fluids. We suggest a short period of gut rest during hydration, followed by reintroduction of oral intake with liquids and low fat foods.
- Women should try to become aware of and avoid environmental triggers and foods which might provoke their nausea and vomiting. Acupuncture and acupressure have not been shown to significantly reduce nausea and vomiting. However, given the absence of harm and the strong placebo effect, some patients may benefit from a trial of acupressure wrist bands. Ginger also appears to have beneficial effects and ginger containing foods, such as ginger lollipops, may be helpful in women with mild nausea and vomiting.

Chronic illness

A collaborative approach to diabetes care in community health centers can improve care and be cost-effective

OBJECTIVE: To estimate the incremental cost-effectiveness of improving diabetes care with the Health Disparities Collaborative (HDC), a national collaborative quality improvement (QI) program conducted in community health centers (HCs).

DATA SOURCES/STUDY SETTING: Data regarding the impact of the Diabetes HDC program came from a serial cross-sectional follow-up study (1998, 2000, 2002) of the program in 17 Midwestern HCs. Data inputs for the simulation model of diabetes came from the latest clinical trials and epidemiological studies.

CONCLUSIONS: During the first 4 years of the HDC, multiple improvements in diabetes care were observed. If these improvements are maintained or enhanced over the lifetime of patients, the HDC program will be cost-effective for society based on traditionally accepted thresholds.

Huang ES, Zhang Q, Brown SE, Drum ML, Meltzer DO, Chin MH. The cost-effectiveness of improving diabetes care in U.S. federally qualified community health centers. Health Serv Res. 2007 Dec;42(6 Pt 1):2174-93; discussion 2294-323

- Where available, pyridoxine-doxylamine succinate combination therapy is recommended for initial pharmacologic treatment of hyperemesis gravidarum. If this drug is not available, we suggest pyridoxine, adding doxylamine succinate if pyridoxine alone is not effective.
- If nausea and vomiting persist, promethazine is also suggested.
- Corticosteroids are not recommended for treatment of hyperemesis.

#2 If conservative measures are successful, does a PICC line facilitate treatment of hyperemesis gravidarum?

No. In fact, it may be dangerous. In this month's Abstract of the Month Holmgren et al, 42 women hospitalized with hyperemesis gravidarum (HEG) were assigned to treatment with medication alone, 33 to a peripherally inserted central catheter (PICC) line, and 19 to a nasogastric (NG) or nasoduodenal (ND) tube. Of those managed with a PICC line, 66.4% (P<.001) required treatment for infection, thromboembolism, or both. In addition, neonatal complications including small for gestational age (SGA), admission to neonatal intensive care, termination of pregnancy because of HEG, and fetal loss were increased in the women who had a PICC.

Have you taken advantage of the free CME we offer on this topic? If not, this next part is definitely low hanging fruit. Just go to this module, review the material, answer a few quick questions, hit the submit button and voila free CME credits…..plus the module offers a great set of materials for future reference.

Nausea and Vomiting in Pregnancy
www.ihs.gov/MedicalPrograms/MCH/M/PNC/NVP01.cfm

Child Health

Nearly 1 in 10 Girls Engages in Frequent Binge Eating or Purging

OBJECTIVE: To identify predictors of becoming eating disordered among adolescents. DESIGN: Prospective cohort study. SETTING: Self-report questionnaires.

SUBJECTS: Girls (n = 6916) and boys (n = 5618), aged 9 to 15 years at baseline, in the ongoing Growing Up Today Study (GUTS). Main Exposures Parent, peer, and media influences.

CONCLUSIONS: Risk factors for the development of binge eating and purging differ by sex and by age group in females. Maternal history of an eating disorder is a risk factor only in younger adolescent females.

Field AE, Javaras KM, Aneja P, Kitos N, Camargo CA Jr, Taylor CB, Laird NM. Family, peer, and media predictors of becoming eating disordered. Arch Pediatr Adolesc Med. 2008 Jun;162(6):574-9

Navajo News

Sandra Dodge, CNP, Chinle

Forty one (41) Indian Health Care Providers complete SANE/SAFE course in Window Rock

Chinle Service Unit recently sponsored a successful SANE/SAFE course at the Navajo Nation Museum June 9-13, 2008. The course instructor was Diana Faugno, RN, MSN, CNP, who provides this SANE/SAFE education across the country. The course focused on forensic medical examination techniques for adults and adolescent survivor of sexual assault. The course also provided the licensed health care providers with the didactic training and resources needed for the certification as sexual assault nurse examiner or sexual assault forensic examiner.

There were 41 participates in Window Rock, Arizona with representatives from the various service units from across the different Indian Health Systems, Navajo, Phoenix, Aberdeen and Billings Area. There were presentations from the Navajo Police Department and Dine Nation Prosecutor's Office, U.S. Attorney's Office from Phoenix, Chinle's Victim Advocate's Office and Crime Lab who provided protocols, policy and procedures from their offices regarding sexual assault and how the SANE/SAFE providers can best facilitate forensic evidences through the examination.

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(PICC line…, continued from page 1)

humans and experimental animals suggest adverse consequences later in life as a result of maternal calorie restriction for even a few months of pregnancy.

Interestingly, in this study, there were no SGA infants in either the group treated with medication alone or the group managed with NG/ND tube placement.

Main complications are thrombosis, infection

The major complications of peripheral and central venous access for nutrition in pregnancy are thrombosis and infection, and the prevalence is now well established to be around 50%. Maternal death from complications of line access has also been reported.

A confirmation of case reports and small series

This study is important because it represents the largest report of women who have received total nutritional support via an enteral feeding tube. Previous reports were limited to single cases or small series.

There is little evidence indicating that the better safety record of enteral feeding and greater efficacy compared with parenteral feeding via a PICC line have led to increased usage. In our own survey of 792 women who self-reported hyperemesis gravidarum from 2000 to 2004, 16.7% reported parenteral nutrition, compared with only 2.3% who reported enteral tube feeding. It is hoped that this study will help reverse this ratio.

Please see this month's Medical Mystery Tour on page 13 for more discussion about this topic.

Have you taken advantage of the free Perinatology Corner CME / CEU Module we offer on this topic? If not, this next part is definitely low hanging fruit. Just go to this module, review the material, answer a few quick questions, hit the submit button and voila free CME credits…plus the module offers a great set of materials for future reference.

Resources:

Nausea and Vomiting in Pregnancy: Perinatology Corner Module
www.ihs.gov/MedicalPrograms/MCH/M/PNC/NVP01.cfm

Holmgren C, Aagaard-Tillery KM, Silver RM, Porter TF, Varner M. Hyperemesis in pregnancy: an evaluation of treatment strategies with maternal and neonatal outcomes. Am J Obstet Gynecol. 2008;198:56.e1–56.e4

Goodwin TM. Does a PICC line facilitate treatment of hyperemesis gravidarum? OBG Management May 2008 • Vol. 20, No. 05

Nurses Corner

Sandra Haldane, HQE

What Is Forensic Nursing?

Forensic Nursing is the application of nursing science to public or legal proceedings; the application of the forensic aspects of health care combined with the bio-psycho-social education of the registered nurse in the scientific investigation and treatment of trauma and/or death of victims and perpetrators of abuse, violence, criminal activity and traumatic accidents.

The forensic nurse provides direct services to individual clients, consultation services to nursing, medical and law related agencies, and expert court testimony in areas dealing with trauma and/or questioned death investigative processes, adequacy of services delivery, and specialized diagnoses of specific conditions as related to nursing.

The above is excerpted from the International Association of Forensic Nurses web site.

For more information about how to become a Sexual Assault Nurse Examiner (SANE) visit the IAFN web site at:
www.iafn.org/index.cfm.

Need technical assistance? Visit the Sexual Assault Forensic Examiner Technical Assistance web site at
www.safeta.org.

Save the dates

Sexual Assault Nurse Examiner/Forensic Examiner (SANE/SAFE) Training Course

- July 21–25, 2008
- Aberdeen, South Dakota
- 40 hour didactic portion of SANE/SAFE training
- For additional information contact Lisa Palucci, lisa.palucci@ihs.gov, at the IHS Clinical Support Center

Community Health Representative National Educational Meeting

- July 29–31, 2008
- Las Vegas, Nevada
- 40th Anniversary of the CHR Program
- www.nachr.net/conferences/2008/

Sexual Assault Nurse Examiner/Forensic Examiner (SANE/SAFE) Training Course

- August 18–22, 2008
- Oklahoma City, Oklahoma
- 40 hour didactic portion of SANE/SAFE training
- For additional information contact Lisa Palucci, lisa.palucci@ihs.gov, at the IHS Clinical Support Center

Postgraduate Course on Obstetric, Neonatal and Gynecologic Care

- September 14–18, 2008
- Salt Lake City, Utah
- Comprehensive Women's Health Update for Nurses, Advanced Practice Nurses, and Physicians
- NRP offered as pre-conference session
- Contact Yvonne Malloy, ymalloy@acog.org, for more information

International Indigenous Women's and Children's Health Meeting

- March 4–8, 2009
- Albuquerque, New Mexico
- Joint conference of Women's Health and Children's Health Providers from Canada and the United States

Abstract of the month

- Does a PICC line facilitate treatment of hyperemesis gravidarum?

IHS Child Health Notes

- Cardiovascular Monitoring of Children and Adolescents with Heart Disease Receiving Medications for Attention Deficit/Hyperactivity Disorder: A Scientific Statement from the American Heart Association Council on Cardiovascular Disease in the Young Congenital Cardiac Defects Committee and the Council on Cardiovascular Nursing
- Infectious Disease Updates—Teen Vaccines: How are we doing?
- Recent literature on American Indian/Alaskan Native Health— Pertussis-associated hospitalizations in American Indian and Alaska Native infants

From Your Colleagues

- Steve Holve, Tuba City—3rd International Meeting on Indigenous Child Health
- Elaine Locke and Yvonne Malloy, ACOG—"For American Indians, healthcare needs grow, money doesn't"

Hot Topics

- Obstetrics—Antibiotic Prophylaxis for Prevention of Postpartum Perineal Wound Complications; A Randomized Controlled Trial
- Gynecology—No increased risk with Misoprostol for treatment of early pregnancy failure in women with previous uterine surgery
- Child health—Obesity and type 2 diabetes risk in midadult life: the role of childhood adversity
- Chronic Illness—Intensive Glucose Control Does Not Prevent Major Cardiovascular Events in Type 2 Diabetes

Features

- ACOG—Medical Management of Ectopic Pregnancy
- AHRQ—"Real Men Wear Gowns"
- Behavioral Health Insights—Chronic Pain Management 101—Saying *No* to Patients
- Cochrane Review—Dietary advice in pregnancy for preventing GDM
- Breastfeeding—A new look at what works to support breastfeeding in hospitals
- Family Planning—Injectable contraception: what should the longest interval be for reinjections?

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