NATIONAL COUNCIL OF CHIEF CLINICAL CONSULTANTS

CCC CORNER

Focus on the Health of American Indian and Alaska Native Women and Children

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Tired of hearing only bad news from the WHI?

Reduction in diabetes incidence with combination hormone replacement

AIMS/HYPOTHESIS: Studies examining the effect of postmenopausal hormone therapy on concentrations of glucose, insulin and diabetes incidence have been inconclusive, in part because many of the studies were too small. We examined the effect of oestrogen plus progestin on diabetes incidence and insulin resistance.

METHODS: The study was a randomised, double-blind trial comparing the effect of daily 0.625 mg conjugated equine oestrogens (CEE) plus 2.5 mg medroxyprogesterone acetate with that of placebo during 5.6 years of follow-up. The participants were 15,641 postmenopausal women enrolled in the Women's Health Initiative Hormone Trial. These women were aged 50 to 79 and all had an intact uterus. Diabetes incidence was ascertained by self-report of treatment with insulin or oral hypoglycaemic medication. Fasting glucose, insulin, and lipoproteins were measured in a random sample at baseline and at 1 and 3 years.

RESULTS: The cumulative incidence of treated diabetes was 3.5% in the hormone therapy group and 4.2% in the placebo group (hazard ratio 0.79, 95% CI 0.67-0.93, p=0.004). There was little change in the hazard ratio after adjustment for changes in BMI and waist circumference. During the first year of follow-up, changes in fasting glucose and insulin indicated a significant fall in insulin resistance in actively treated women compared to the control subjects (Year 1 to baseline between-group difference -0.22+/-0.10, p=0.03).

CONCLUSION: These data suggest that combined therapy with oestrogen and progestin reduces the incidence of diabetes, possibly mediated by a decrease in insulin resistance unrelated to body size. Future studies of alternative postmenopausal hormone therapy regimens and selective oestrogen agonists and/or antagonists should consider the effects of these regimens on insulin resistance and diabetes.

Margolis KL, et al Effect of oestrogen plus progestin on the incidence of diabetes in postmenopausal women: results from the Women's Health Initiative Hormone Trial. Diabetologia. 2004 Jul;47(7):1175-87.

Comment: Thomas Burke, Anchorage

Does hormone replacement prevent Type II Diabetes?

The question has been raised by several small observational studies with conflicting results*. Now we have 3 large studies that show a significant decrease in diabetes incidence for women taking estrogen with progesterone.

The Nurses Health Study (N=21,028) was prospective and observational. HERS, the Heart and Estrogen/Progesterone Replacement Study (N=2029) and WHI the Women's Health Initiative (N=15,641) were both large prospective randomized studies.

All three showed a significant decrease in diabetes incidence of 20% or more. The studies controlled for other risk factors like weight and the WHI showed a decrease in insulin

(continued on page 15)

THIS MONTH

In celebration of the Winter Solstice we added an icy blue background.
Solstice means "standing-still-sun." This planetary tilt is what causes all the drama and poetry of our seasons. Stay tuned to see what the Vernal Equinox brings next month.

Also on-line....

This is a digest of the monthly Obstetrics and Gynecology Chief Clinical Consultant's Newsletter which is available on the Internet at: www.ihs.gov/MedicalPrograms/MCH/M/OBGYN01.cfm

The official publication of the National Council of Chief Clinical Consultants

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

Neil J. Murphy

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IHS Child Health Notes

March 2006

"It doesn't matter if the cat is black or white as long as it catches mice."
—Deng Hsaio P'ing 1904–1997

"If you want to see what children can do, you must stop giving them things"
—Norman Douglas

Articles of Interest

Cardiovascular screening of student athletes.

Am Fam Physician. 2000 Aug 15;62(4):765-74

- Sudden cardiac death occurs in 1/200,00 high school athletes per year
- The majority of sudden deaths are related to undiagnosed congenital cardiac anomalies such as hypertrophic cardiomyopathy (40%), coronary artery anomalies (20%), and increased cardiac mass 910%)
- Screening is problematic because of the low incidence and low risk of death: 200,000 athletes need to be screened to identify 1,000 with risk for sudden death for the 1 athlete who would die
- Currently, there is no cost-effective battery of tests to identify all, or even most, of the dangerous cardiovascular conditions
- Current consensus is to follow the 1996 screening guidelines of the Sudden Death Committee of the American Heart Association: These utilize a combination of personal history, family history and cardiac exam

Medical and legal issues in the cardiovascular evaluation of competitive athletes.

JAMA. 2005 Dec 21;294(23):3011-8.

- Physician screening should adhere to the 1996 recommendations of the Sudden Death Committee of the American Heart Association
- The recommendations state that pre-participation screening by history and exam is clinically justified but that routine non-invasive testing is not recommended due to the low yield and prohibitive cost
- When cardiovascular abnormalities are identified or suspected, the athlete should be referred to a specialist for further evaluation. He/she should not be cleared until this evaluation is completed.
- Court decisions state that athletes can rightfully be disqualified from competitive sports if reasonable national guidelines are used.

Editorial Comment

Despite a lack of compelling evidence to show that cardiovascular preparticipation screening is effective, it is recommended based on cost and medicolegal considerations and is required by nearly all high schools in the United States. While this method may be imperfect, the American Heart Association 1996 guidelines are considered the most practical and best available strategy for screening large populations of athletes. These guidelines have become the medical and legal standard for sports examinations in this country. The guidelines are listed in both articles. The American Family Physician article also has a sample physical exam and screening questionnaire that has become the standard form in many states.

One benefit of preparticipation sports exams is that physicians have an opportunity to evaluate and counsel adolescents who may not otherwise be seen for medical care. The sports exam is not intended to exclude athletes from participation but to maintain their health and safety. The exam should focus on ensuring the safety of the adolescent athlete and, to the extent possible, be used as an opportunity to counsel young athletes on the important health issues of adolescence.

Infectious Disease Updates.

Rosalyn Singleton, MD, MPH

RotaTeq™ (Rotavirus vaccine) newly licensed for infants

The FDA just licensed a new Rotavirus vaccine, RotaTeq™ (Merck & Co., Inc.) to prevent severe gastroenteritis in infants. RotaTeq™ is a live oral 3 dose vaccine to be given at 2, 4, and 6 months of age. The Advisory Committee on Immunization Practice is expected to decide on recommendations later this month.

Rotavirus causes an estimated 2.7 million episodes of gastroenteritis, 250,000 emergency room visits, and up to 55,000 hospitalizations per year in the United States. The licensure is based on a Phase III REST efficacy study, which involved 70,000 infants. RotaTeq™ prevented 98% of severe cases of vaccine-strain rotavirus and 98% of severe cases of any rotavirus strain. In addition, RotaTeq™ prevented 71% of rotavirus gastroenteritis of any severity. Unlike the ill-fated RotaShield™ vaccine in 1999, RotaTeq™ was not associated with increased incidence of intussusception – there were 13 cases of intussusception in the vaccine group and 15 cases in placebo group.

Editors Note:

Rotateq is already approved for the Vaccine for Children Program that provides immunizations at no cost to AI/AN. However, as a practical matter most states will probably not begin purchase of this vaccine until late summer or Fall.

➔

Recent literature on American Indian/ Alaskan Native Health

Doug Esposito, MD

Race, Genetics, and the Biologic Versus Social Determinants of Health and Health Disparities

The December 2005 issue of the American Journal of Public Health is devoted to exploring the controversial relationship between genes, race, and health disparities. This hotly debated issue is outlined in a collection of five articles, well worth study by anyone endeavoring to understand the basis for measured differences in health status of racially and ethnically distinct groups. What are the underlying determinants of health disparities? Are they a function of the inherent genetic makeup of groups and populations, or are they born out of socially imposed inequities and injustices in exposure and access to resources? This timely volume seeks to bring these issues into focus.

In "Bridging the Gaps between Race and Genetics," Michael Fine calls into question the existence of substantive data supporting the presence of genetic or biologic determinants of racially derived health disparities. He contends that an ever increasing body of evidence to the contrary exists. "Although considerable time and energy have been devoted to understanding the associations between genes, race, and health disparities over the past decade, there is currently abundant evidence that a multitude of other nonbiological, nongenetic factors contribute to health disparities. These well documented factors include diminished access to health care, low socioeconomic status, cultural preferences, low levels of health literacy, racial discrimination, poor doctor–patient communication, and environmental hazards and exposures. Despite the progress that has been made in understanding the genetic makeup of humans, genetics research does not yet have the capacity to explain or rectify observed racial disparities in health or health care. Thus, the jury remains out regarding the value of genes and genomics as tools for understanding and addressing health disparities."

In their editorial "The Role of Race and Genetics in Health Disparities Research," Fine, Ibrahim, and Thomas investigate the pros and cons of using a genetic definition of race in medical research. Central to the argument is whether race is a biologic, or conversely, a socio-cultural construct. It all boils down to how one uses genetic data and ethics/social justice to argue the case. Their contention is that insufficient evidence exists to support a genetic or biologic basis for race. Therefore, health disparities are more appropriately investigated and addressed through a thorough understanding of the interplay between environment, exposure, and access to resources as modulators of prevalence and outcomes of disease. Furthermore, they contend that there is no demonstrated role for "race-based genomics to reduce or eliminate such disparities." On the contrary, they assert that such a view likely impedes progress toward the elimination of racial and ethnic health disparities.

In "Racializing Drug Design: Implications of Pharmacogenomics for Health Disparities" Sandra Soo-Jin Lee, too, suggests the potential negative consequences of using a genetic/biologic definition of race on achieving health equity. His arguments are compelling as he points out that science's continued attempts to strengthen the notion of a biologic basis for race likely will further strengthen "race as a naturalized, immutable biologic reality." Or, in my own words, the medical and social institutionalization and ratification of biologically-based racism.

Thomas, et al. present a complex review of the ethical considerations of genomics in public health in "Genomics and the Public Health Code of Ethics." Here, they lay out the differences and similarities between medical ethics and public health ethics. They then go on to define the ethical issues in genomics from both a medical and public health perspective. Most developed is a discussion of genomics and ethical concerns as they relate to the 12 principles of the Public Health Code of Ethics. A good article, but one I frankly had some trouble digesting!

Finally, Nancy Krieger eloquently argues in favor of considering race as a random concept born entirely out of historic and non-scientific fallacy in "Stormy Weather: Race, Gene Expression, and the Science of Health Disparities." If you only read one of the five listed articles, I would recommend this one. It is the most interesting, insightful, articulate, and entertaining of the lot!

So, what is genomics anyway? According to Guttmacher et al., genomics is "the study of the functions and interactions of all the genes in the genome, including their interactions with environmental factors."

Genomic medicine—a primer. N Engl J Med. 2002;347:1512–1520. http://content.nejm.org/cgi/content/extract/347/19/1512.

In my opinion, it is important to recognize that modern man shares about 99.9% homogeneity in genetic composition, and that most (90-95%) of the observed genetic heterogeneity lies within, not between, population groups. Additionally, much of our genetic content appears to be little more than filler! With so little genetic variance between the "races," how then can genomics hope to explain health disparities? I'm not sure it can. As Krieger points out, "phenotype is not equivalent to genotype—precisely because observed traits are a function of gene expression and not simply gene frequency. As any serious engagement with developmental biology would readily reveal, genetically identical organisms raised under markedly different conditions exhibit important differences in stature, appearance, and physiology. To assume that phenotypic variation among humans is a function solely of inherited genes is an ideological, not scientific, argument." In fact, "race" appears to be a purely human designation, born entirely out of the human psyche.

So, what does this all mean? Again, in the words of Krieger: "The larger goal is to strengthen development of a more critical,

(continued on page 15)

Hot Topics

Obstetrics

GDM: Can we proceed directly to one step screening/diagnosis in AI/AN women?

Some providers have noted that many AI/AN patients are lost to follow-up between a positive glucose screen test result and the performance of the definitive diagnostic test, the 3 hour oral glucose tolerance test.

Other providers noted that many AI/AN women live in remote areas with limited access to care, yet have some of the highest rates of diabetes in pregnancy in the U.S., and possibly the highest in the world.

ACOG and the Indian Health system convened an Expert Panel of 35 experts on April 12, 1993* to discuss these and other issues related to the diagnosis of gestational diabetes mellitus in pregnancy. One of the main areas of discussion was that eliminating the screening phase and proceeding directly to a diagnostic test seemed warranted in certain AI/AN populations.

There was general concurrence that these rates were so high that being an AI/AN woman was sufficient to serve in itself as a positive screen, and thus to indicate the need for a diagnostic level of testing directly.

The Expert Panel suggested that upcoming Technical Bulletins (subsequently modified to 'Practice Bulletins') reflect that other loading doses are currently used in other populations.

Hence, the current ACOG Practice Bulletin, No. 30 now states…

"…there may be groups of individuals at such high risk for GDM that it may be more convenient and cost-effective to proceed directly to the diagnostic GTT without obtaining the laboratory screening test…."

OB/GYN CCC Editorial

After the above ACOG Consultation, the American Diabetes Association issued the following statement:

One-step approach: ADA

Perform a diagnostic OGTT without prior plasma or serum glucose screening. The one-step approach may be cost-effective in high-risk patients or populations (e.g., some Native-American groups). "

Bottomline

The ACOG Consultation was a high level document, e. g., no direct recommendations came out of the ACOG Consultation—it was ultimately left up to the local facility.

Personally, a good rule of thumb is that if any AI/AN group exceeds 7 %, then they would qualify for one step testing…. hence within the context of the ACOG/ADA verbiage above, I suggest…

…any AI/AN group that exceeds a 7% prevalence of diabetes in pregnancy should consider one step universal diabetes screening. This screening should occur at 24-28 weeks. If additional high risk factors are present, then additional screening should also be performed at the first prenatal visit.

High risk patients include those with the following factors:

a history of infant over 8 lb.14oz. (4000 grams) at birth;
b first degree family history of diabetes (parents or sibling);
c initial visit BMI > 25 BMI = kg/m2 X 100 (see Appendix C)
d past hx: stillbirth, habitual abortion, congenital anomaly
e current pregnancy: unexplained polyhydraminos, persistent glycosuria
f age > 35 years
g prior history of gestational diabetes

Other Resources

Gestational Diabetes. ACOG Practice Bulletin No. 30. American College of Obstetricians and Gynecologists. Obstet Gynecol 2001;98:525–538

Diagnosis and Classification of Diabetes Mellitus Diabetes Care 29: S43-S48, 2006

** ACOG Consultation: Diagnosis of Gestational Diabetes Mellitus, April 12, 1993*

Copies of the full 1993 Proceedings can be obtained from Elaine Locke, ELocke@acog.org or Neil Murphy, M.D., nmurphy@scf.cc

Link between GDM and Type 2 DM can be broken: Update

The similarity of findings between the PIPOD and TRIPOD studies support a class effect of thiazolidinedione drugs to enhance insulin sensitivity, reduce insulin secretory demands, and preserve pancreatic beta-cell function, all in association with a relatively low rate of type 2 diabetes, in Hispanic women with prior gestational diabetes.

Xiang AH, et al Effect of pioglitazone on pancreatic beta-cell function and diabetes risk in Hispanic women with prior gestational diabetes. Diabetes. 2006 Feb;55(2):517-22.

OB/GYN CCC Editorial

The January 2006 the CCCC previously reported that treatment with troglitazone delayed or prevented the onset of type 2 diabetes in previous GDM patients (Buchanan et al). Unfortunately, troglitazone was subsequently taken off the market. Xiang et al now report similar effect which raises the question of a class effect in the thiazolidinedione drugs. As many as 70% of GDM patients can progress onto Type II DM, especially if they do not return to their ideal body weight. Combined with the Diabetes Prevention Program that should the consistent moderate exercise can also decrease the progression to DM, Xiang's finding give us two strong tools in our armamentarium to prevent the future complications of DM in our patients. ➔

➔ Gestational Glucose Tolerance Risk of Type 2 Diabetes in Young Pima Indian Offspring

...Maternal glycemia during pregnancy is associated with increased birth weight and risk of diabetes in Pima Indian offspring, even when mothers are normal glucose tolerant during pregnancy. Thus, prevention of offspring type 2 diabetes may require strategies that focus on improving gestational glucose tolerance even within the normal range.

Franks PW, et al Gestational glucose tolerance and risk of type 2 diabetes in young Pima Indian offspring. Diabetes. 2006 Feb;55(2):460-5.

OB/GYN CCC Editorial

As with the above article, Franks et al reminds that our AI/AN patients are at higher than expected risk for glucose intolerance and its complications. The in utero environment is a powerful risk factor for type 2 diabetes in offspring, but little is known about the risk conveyed by nondiabetic gestational glucose levels. At the very least Franks et al suggests that until we know more, we need to manage at least our known GDM patients very closely and be sure to inform our patients about their increased risk. For more information on the diagnosis and management of diabetes in pregnancy, here are two educational modules with excellent resources (and free CME/CEUs)

Gynecology

Diet and Exercise Reduce Incontinence in Women at Risk of Diabetes

CONCLUSIONS: Less-frequent urinary incontinence may be a powerful motivator for women to choose lifestyle modification to prevent diabetes

Brown JS, et al Lifestyle intervention is associated with lower prevalence of urinary incontinence: the Diabetes Prevention Program. Diabetes Care. 2006 Feb;29(2):385-90.

Child Health

FDA Warns Parents About Contaminated Teething Rings

The Food and Drug Administration urges parents to stop giving their babies a liquid-filled plastic teething ring made by The First Years, a unit of RC2 Corp., which may be contaminated with bacteria. Liquid in the teething rings could infect infants if they swallow or absorb it through a cut in the mouth, the FDA said. The risk of illness is greatest for babies with immune systems weakened by cancer, malnutrition or other health problems.

www.thefirstyears.com

Chronic Illness

American Heart Association Updates Guidelines for Blood Pressure Management

The American Heart Association (AHA) updated its position statement on lifestyle modifications for the prevention and treatment of high blood pressure (BP).

The guidelines emphasize increased intake of fruit and vegetables, and limiting alcohol intake to moderate levels for patients who drink alcohol. Clinicians should offer individualized lifestyle advice and refer patients diagnosed as having hypertension to dietitians, health educators, or behavioral modification programs. Other specific recommendations include:

- Maintaining normal weight or losing weight if overweight. Research suggests that weight loss lowers BP even before the ideal weight goal is reached. However, greater weight loss leads to greater BP reduction. In addition to diet, a high level of physical activity is vitally important to sustain weight loss.
- Reducing sodium intake to about 1.5 g/day, because this measure lowers BP in people with and without hypertension, and it can ameliorate the age-associated rise in BP and lower the risk for atherosclerotic CVD events and congestive heart failure. Reducing salt intake is most effective in lowering BP in older people and in those with hypertension, diabetes, or chronic kidney disease. More than 75% of consumed salt in the US diet comes from processed foods, so the writing committee asked food manufacturers to reduce salts in food by 50% during the next 10 years.
- Eating 8 to 10 servings of fruits and vegetables daily to increase potassium intake, which effectively reduces BP both in normotensive and in hypertensive individuals, especially in blacks. Although recommended potassium intake is 4.7 g/day, this amount should be reduced for patients with impaired renal function or severe congestive heart failure.
- Moderating alcohol intake, because there is a dose-response relationship between alcohol and BP, especially in people drinking more than 2 drinks daily. Although a meta-analysis of 15 trials shows that consuming less alcohol reduces both systolic and diastolic BP, moderate alcohol intake may also be effective in lowering BP. Alcohol consumption should not exceed 2 drinks daily in most men or 1 drink daily in women and lighter-weight persons.
- Following the DASH diet and emphasizing fruits, vegetables, and low-fat dairy products. The diet also includes whole grains, poultry, fish and nuts, and it restricts fats, red meat, sweets, and sugar-containing beverages. Research suggests that substituting some carbohydrates with protein, mostly from plant sources or with monounsaturated fat, further lowers BP. Because the DASH diet is relatively high in potassium, phosphorus, and protein, it is not recommended for those with renal failure.

Appel LJ, et al Dietary approaches to prevent and treat hypertension: a scientific statement from the American Heart Association. Hypertension. 2006 Feb;47(2):296-308.

Features

Ask a Librarian

Diane Cooper, M.S.L.S./NIH
Library Services for the Indian Health Service

Your library contact

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(301) 594-2449

As your library contact, I am here to help you meet your information needs. If you need to find information at either patient point-of-care or to provide background for a specific project, I can help. I am here to save you time and ensure you get the information you need.

As your direct link to HSRL, I can support you in the following ways:

- Help with complex and difficult literature searches to support direct patient care and patient care activities
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- Assist in manuscript preparation (verify references; editing)
- Set up current awareness alerts in your field of interest
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- Provide instruction on how to search literature databases and other information resources

Other Services

WEBSITE: The library's website, located at http://hsrl.nihlibrary.nih.gov, provides access to electronic resources that are critical to the work of HHS staff. These resources include:

- Online Journals – access to full-text articles
- Databases – MEDLINE, Web of Science, PsycINFO, and more
- Research Updates – Porpoise Alert Service developed at NIH
- Online Catalog – search for books and journals held by the HSRL
- Document Requests – journal articles delivered by email

DOCUMENT DELIVERY: The library provides document delivery of journal articles and books. Items not available in the library's collection are obtained from another library. You can submit a request via the library's website.

Breastfeeding—Suzan Murphy, PIMC—Breastfeeding as a Pain Reliever

Most of us can manage the momentary discomfort from minor invasive medical procedures. Just a little pinch for an injection, venopuncture or finger stick is quickly forgotten as a small price for the knowledge or benefit that the procedure provides. However, when the "little pinch" is happening to newborns, parents and providers have a bigger struggle. Neonates experience pain, possibly more profoundly than older babies1, 2. Therefore, finding ways to reduce the level of pain that a newborn experiences from necessary, minor, invasive medical procedure is important to neonatal care.

Traditionally, there have been few options for newborn pain management. Pharmaceutical tools have not been commonly used due to questionable effectiveness and potential adverse effects. But with new tools such as sweet solutions, pacifier use and breastfeeding being explored, there are possibly new minor pain management options to use.

Expanding on work done by L. Gray et al at Boston University School of Medicine 3,4 R. Carbajal et al 5 at Poissy-Saint Germain Hospital in France explored the effectiveness of infant pain relief during a routine, invasive, medical procedure. 180 term well infants were divided into 4 groups of 45 infants each, to be monitored during a venopuncture. The variable groups were breastfeeding, being held in their mother's arms (not breastfeeding), receiving sterile water, and receiving 30% glucose followed by a pacifier. During the venopuncture procedure, infants were monitored for response to pain using videoed observations of facial, eye and limb movements, and vocal response such crying and clinical indicators of heart rate and oxygen saturation. The results were consistent with L. Gray et al's research of slightly older infants (5-7 wk). Breastfeeding was effective in reducing indicators of pain response during a common invasive medical procedure.*

It was noted that using glucose followed by a pacifier was equally as effective as breastfeeding. The variables of holding an infant or offering sterile water were not found to effectively reduce the pain response.

Breastfeeding during a minor medical procedure could be easily achieved in the clinic environment. It could also ease procedures, benefiting the staff, patient, and family.

* There was no variation in sucking reported by mothers who breastfed during the venipuncture. This suggests that there was no negative maternal impact, such as nipple chomping/biting, while the infant experienced the venopuncture.

Articles available upon request

Midwives Corner—Rosemary Bolza, CNM and Marsha L. Tahquechi, CNM

Should we continue to draw Rubella titers as part of the prenatal panel?

I remember having rubella. It wasn't too bad. We had a trip planned so my mother went ahead and took me on the Greyhound bus. I got to wear dark glasses and thought I was pretty cool. However my children never had this experience because of the development of vaccinations for rubella and, measles (rubeola).

In my midwifery program in 1981, documenting immunity to rubella was important for both the midwife and the prenatal patient even though rubella was very rare at that time. The devastating consequence of congenital rubella meant that health care providers needed to be sure they were immune and that pregnant women who were not immune needed to take precautions if there were an outbreak of rubella. However I believe that today the rubella titer gives us a false sense of security and that we would give better care by concentrating on documenting and updating immunizations.

Several years ago the CDC put out new releases that rubella was not present in the United States. The disease that is still sometimes seen is the measles (rubeola). In the early 90s it became apparent that two MMRs are needed to give good protection against the measles. I often see providers who look only at the rubella immunity and do not take the time to check if the patient has had two MMRs. Rubella immunity does not assure immunity to rubeola. Even if a person is rubella nonimmune if they have had two MMRs there is no recommendation to continue to give more MMRs so the routine drawing of the rubella titer is not necessary. The time and money spent on rubella titers for prenatal patients would be better spent documenting and updating the all of the recommended adult immunizations for the prenatal patient.

OB/GYN CCC Editorial

Special thanks to Rosemary Bolza for bringing up this subtle, but important issue. Rosemary's point goes with a long line of obstetric practices that consume energy, but have no 'value added', e.g., there is no role for routine urine dipstick testing in return prenatal visits.

Here are some thoughts from Ros Singleton, CDC/ANMC, plus a link to the CDC document that echo Rosemary's comments above.

Should all pregnant women have serology screening for rubella and varicella?

No. Serologic testing for varicella should be considered only for women who do not have evidence of immunity (reliable history of chickenpox or documented vaccination). Rubella serologic testing is only necessary for women who cannot provide written documentation of rubella vaccination. Once a person has been found to be seropositive, it is not necessary to test again in the future.

If an employee has 2 documented MMRs but has negative titers for one or more of these diseases, should I give an additional MMR dose?

The Advisory Committee on Immunization Practices (ACIP) does not routinely recommend more than two doses of MMR. A negative serology after two documented doses of MMR probably represents a false negative (i.e., antibody titer too low to detect with commercial tests). However, it is theoretically possible to have true 2-dose vaccine failure. If a person is found to have a negative serology after two documented doses of MMR, it may be prudent to administer one additional dose of MMR. You should also cease doing postvaccination serologic testing if an employee has two documented doses of MMR, which is the ACIP definition of "immune."

Acceptable documentation of immunity for rubella in childbearing women include: documentation of 1 dose of MMR (or other rubella containing vaccine) or lab evidence of immunity. However, measles immunity requires 2 doses of MMR. I agree with you that it is important to ensure immunity to both measles and rubella titers could prevent someone from getting a second dose of MMR. The 2nd MMR right now is only required in school-aged children, some colleges, and in hospital care workers —so it's not universal, but it's a good idea

Do Birth Certificate Data Reflect the Number of CNM-Attended Births?

The number of midwife attended births has been steadily increasing since the 1970's. This growth has been primarily attributed to the growth in the CNM population. In 2002 8.1% of all births were attended by a midwife. Still, despite the increase there is evidence that midwife attended births are under reported. This small study at a Michigan practice from June to August of 1999 reviewed 899 births for accuracy in reporting birth data.

Conclusions: There was an over reporting of CNM attended births at the hospital level. However the state vital statistics records showed a 10.9% under reporting of CNM attended births. The under reporting of CNM attended births while unclear in origin have been attributed to a variety of possible errors. Recommendations were made to improve the accuracy in the reporting of CNM attended births. CNM's are encouraged to learn about the birth registration process at the local, state and federal levels to ensure accuracy in reporting CNM attended births.

Walker DS, et al Do birth certificate data accurately reflect the number of CNM-attended births? An exploratory study. J Midwifery Womens Health. 2004 Sep-Oct;49(5):443-8

OB/GYN CCC Editorial

In a stroke of fortuitous coincidence the CDC released the following QuikStat this month. So now that you looked at the above, do you think the CDC is accurate?

In 2003, approximately 8.0% of births were attended by midwives, more than double the 1990 rate of 3.9%. In six states (Alaska, Georgia, New Hampshire, New Mexico, Oregon, and Vermont), rates were at least twice as high as the national rate. National Vital Statistics System, Natality File 2003.

www.cdc.gov/nchs/births.htm

From Your Colleagues

Chuck North, Albuquerque

Keams Canyon 1979: Have you ever noticed that some things never seem to change?

Tom Harris converted some old slides into Power Point for me about Perinatal study at Keams Canyon in 1979. I thought you might be interested in this data for historical comparisons. I presented it at a COA meeting but never published the data. Here is the url on the MCH site: **www.ihs.gov/MedicalPrograms/MCH/M/Pr01.cfm#periStudy**

The findings were remarkably similar 20 years later from Zuni in 2 papers published by Larry and Rebecca Leeman in Journal of Family Practice. The most interesting finding was the similarity in cesarean rates of 7%.

Do all hospitals need cesarean delivery capability?

Outcome based study: Zuni, New Mexico. J Fam Pract. 2002 Feb;51(2):129-34

Native American Community with a 7% Cesarean Delivery Rate. Leeman(s): What explains the low rate in Zuni? J Fam Pract. 2002 Feb;51(2):129-34.

Oklahoma Perspective

Greggory Woitte, Hastings Indian Medical Center

Metformin and Polycystic Ovarian Syndrome

Polycystic ovarian syndrome is present in approximately 5-7% of women and is defined as hyperandrogenism and chronic anovulation. Women with PCOS have an 11 fold increased risk in the prevalence of metabolic syndrome. Metformin combined with clomiphene citrate increases the likelihood of successful ovulation and pregnancy rates. Metformin has been shown to decrease insulin resistance and cause weight loss in obese women.

Metformin for the treatment of polycystic ovary syndrome (Barbieri RL.)

RESULTS: Three clinical trials reported that for the treatment of anovulatory infertility caused by PCOS, metformin plus clomiphene is more effective than clomiphene alone in inducing ovulation. For the treatment of irregular menses caused by PCOS in women not attempting conception, metformin therapy may restore ovulatory menses in the majority of women. However, most women will require 4-6 months of metformin therapy before they achieve ovulatory menses. In obese women, metformin plus a low-calorie diet may be associated with more weight loss than a low-calorie diet alone. CONCLUSION: Polycystic ovary syndrome is a common gynecologic endocrine disorder. Obstetrician-gynecologists should be familiar with the indications and contraindications for the use of metformin in their practice.

OB/GYN CCC Editorial

Thanks to Dr. Woitte for reminding us about the high frequency of PCOS. We should maintain a high index of suspicion, especially because PCOS is highly amenable to medical therapy. Metformin has other beneficial uses in the treatment of glucose intolerance and in the prevention of Type II DM during the Diabetes Prevention Program. (Knowler et al, 2002)

Another common question is….what is the role of metformin in lactation?

The official notation is : "Excretion in breast milk unknown/not recommended", but please also review the following case series published in the June 2005 CCC Corner by Briggs:

Metformin was excreted into breast milk, and neither hypoglycemia nor other adverse effects were observed in 3 nursing infants.

CONCLUSION: Metformin is excreted into breast milk, but the amounts seem to be clinically insignificant. No adverse effects on the blood glucose of the 3 nursing infants were measured.

LEVEL OF EVIDENCE: III Briggs GG, et al Excretion of metformin into breast milk and the effect on nursing infants. Obstet Gynecol. 2005 Jun;105(6):1437-41.

Resources:

Polycystic ovary syndrome. ACOG Practice Bulletin No. 41. American College of Obstetricians and Gynecologists. Obstet Gynecol 2002; 100:1389–402

Barbieri RL. Metformin for the treatment of polycystic ovary syndrome. Obstet Gynecol. 2003 Apr;101(4):785-93.

Knowler WC, et al Reduction in the incidence of type 2 diabetes with lifestyle intervention or metformin. N Engl J Med. 2002 Feb 7;346(6):393-403.

Perinatology Picks

George Gilson, MFM, ANMC

Move beyond 'integrated' screening to 'contingency' screening

There is a great deal of ongoing confusion about prenatal genetic screening. First, here are just some common issues, plus some misperceptions

- The nuchal translucency/PAPP-A testing can only offered to those patients who have private insurance or who choose to pay for the testing themselves ($95-$165).
- Advanced Maternal Age:
  Are providers thinking about the Nuchal Translucency with the PAPP-A testing?
  It is not well documented in the charts, which I reviewed, that this option was even discussed, i.e. benefit and risk. We can use the NT and dating ultrasound for two purposes for the AMA woman.
- Who is available to do Genetic Amniocentesis?
  A 41 y.o. patient had to wait until 19 weeks for a genetic amniocenteses because the perinatologist was out of town. She would have acted on the result, if there was a genetic problem found. Could we have had another provider do the amniocentesis sooner?
- We don't have onsite chorionic villus sampling (CVS), so we shouldn't offer 1st trimester screening

Let's look at what methods are available?

INTEGRATED TEST: The combined 'integrated test' consists of ultrasound measurement of nuchal translucency thickness at 10 to 11 weeks combined with serum markers obtained in both the first (PAPP-A) and second (quadruple test) trimesters (at 10 to 11 and 15 to 18 weeks).

SERUM ONLY: The serum integrated test consists of serum markers obtained in both the first (PAPP-A) and second (quadruple test) trimesters (at 10 to 11 and 15 to 18 weeks), but no ultrasound markers.

SEQUENTIAL TESTING: Sequential screening refers to the repetition of screening tests in the second trimester in women who have already had first trimester screening.

CONTINGENT TESTING: Contingent screening has also been proposed. This approach is defined in terms of three risk cut-offs: (1) women at very high risk of having a fetus with Down syndrome after first trimester testing would be offered immediate invasive prenatal diagnosis, (2) women at very low risk would be provided with their risk estimate and would require no additional testing, and (3) women at intermediate risk would receive second trimester marker testing. The risk of women in group (3) would be reevaluated in the second trimester after integrating all first and second-trimester markers and comparing the result with a third risk cut-off. This model provides an early result in most pregnancies for only a small increase in the overall false positive rate compared to the integrated test. It has the advantage of avoiding the difficulty of nondisclosure of first-trimester results, but has not been tested in clinical trials.

GENETIC SONOGRAM: A genetic sonogram is a tool for the sonographic risk assessment of Down syndrome in the second trimester.

Now let's compare:

INTEGRATED TESTING: This combines markers measured in the first and second trimesters to determine a single estimate of risk, is primarily used to detect trisomy 21, but, as described below can also detect trisomy 18, which is associated with a different pattern of test results.

Current methods of first or second trimester screening yield a relatively high level of detection (75 to 85 percent), but at a false positive rate of 5 percent. Thus, 5 percent of women with unaffected pregnancies are offered invasive testing, with its attendant risks.

The main downside is that the patient can not avail herself of 1st trimester testing. Another related downside is the slightly troubling ethics of withholding clinical information from the pt in the integrated screening method* that would have allowed her to get first trimester diagnostic testing.

INDEPENDENT SEQUENTIAL TESTING: Refers to an approach whereby results from first trimester screening are divulged to the patient and CVS is offered to women whose results place them at very high risk of an affected fetus, while those whose screen does not place them at very high risk go on to have second trimester screening. However, the second trimester risk is calculated without considering the first trimester test results.

The downside is that it offers no opportunity to perform 1st trimester testing. Hence, it raises questions about the ethics of withholding information that denies 1st trimester options to patients.

The benefits and problems of independent sequential screening were illustrated in a multicenter study of the first trimester combined test, sponsored by the National Institute of Child Health and Human Development.

The false positive rate for the second trimester test was 8.9 percent for those who had been screen negative in the first trimester and 38.7 percent for those who had been screen positive in the first trimester (10.2 percent false positive rate overall). An overall detection rate of 98 percent was achieved, but at a false positive rate for the first and second trimester tests taken together of about 17 percent. This study shows that independent first and second trimester sequential testing, where the results of first trimester screening are not incorporated into the total risk assessment, results in a very high overall detection rate, but at an inappropriately high false positive rate.

➔ Step-wise sequential screening: The step-wise sequential screening process involves performing the first trimester portion of the integrated screen and then offering CVS to women whose results place them at very high risk (possibly 1 in 50) of an affected fetus, while those whose screen does not place them at very high risk go on to complete the second trimester portion of the test. The risk calculated from the first trimester test and the effect of some of the first trimester markers on some of the second trimester markers are taken into account in determining the risk of Down syndrome from the second trimester test. This is a complex calculation; issues related to this type of step-wise sequential testing have been reviewed.

In the FASTER trial discussed above, step-wise sequential screening detected 95 percent of Down syndrome fetuses at a FPR of 4.9 percent. These rates approach those with fully integrated screening, but have the benefit of availability of early results for the highest risk patients.

Contingent screening: Contingent screening is a third type of sequential screening. This approach is defined in terms of three risk cut-offs: (1) women at very high risk (possibly >1 in 10) of having a fetus with Down syndrome after first trimester testing would be offered immediate invasive prenatal diagnosis, (2) women at very low risk (possibly <1 in 2000) would be provided with their risk estimate and would not undergo any additional testing, and (3) women at intermediate risk (in this example, between 1 in 10 and 1 in 2000) would have a second trimester blood draw.

The risk of Down syndrome in group (3) would be reevaluated by incorporating all first and second-trimester markers into an integrated risk assessment. This model provides an early result in most pregnancies for only a small increase in the overall false positive rate compared to the integrated test, and may also save costs, but requires further analysis of appropriate risk cut-offs, as well as clinical testing. It has the advantage of avoiding the difficulty of nondisclosure of first-trimester results, but has not been tested in clinical trials.

In summary, in the contingent the patient receives both first and second trimester screening. This method allows pt to get 1st trimester diagnostic testing. In addition pt receives a 1st trimester score, which obviates further testing in most (75-85%) patients who are essentially finished if they have another way to screen for neural tube defects (serum AFP or targeted US)

OB/GYN CCC Editorial

While 'integrated testing' is becoming the default choice in many settings, other first trimester testing methods are actually preferable to the integrated test for many logistical ways. There are also the slightly troubling ethics of withholding clinical information from the pt in the integrated screening method* that would have allowed her to get first trimester diagnostic testing.

Nationally, despite the high sensitivity of the 'Integrated screening', the preferred method at this point is 'contingency testing'.

Unfortunately, many of our Indian Health settings do not have CVS readily available. We are not alone, the U.S. in general is in a transition in which there are too few providers skilled in CVS to keep up with the advances in these combined analyte methods. If CVS is not readily available, then a standardized referral pattern for CVS is acceptable.

By the way, genetic amniocentesis can be performed by any provider who has the documented training, experience, and current competence.

Comment: George Gilson, MFM

At ANMC we are offering 'contingency' screening'" and it works quite well. If the patient comes early enough for 1st trim screening they are offered initial serum screening an genetic ultrasound. If their 1st trimester screen is negative for Down syndrome, they really don't need any further testing. (Also see NTD screening below*)

If her 1st trimester testing is positive, she is offered referral for CVS or "integrated" screening with 2nd trim testing. If they present after 13 wks, then they are offered the quad screen as per usual.

To me the biggest advantage is not only the earlier answer, but the lower false positive rate (FPR), with much less maternal anxiety and invasive testing being generated. The FPR for women <35 y/o is 3% with 1st trim screening. Since our sonographers have moved beyond nuchal translucency (NT) and have become certified to also look at nasal bone and ductus venosus, the detection rate is 91%, pretty reassuring for the pt, and considerably better than the figures someone else quoted in these email strings.

The cost "problem"

This has actually been less of an issue that one would expect. In many states both Medicaid (which almost all our patients have) and private insurances pay for 1st trim testing. Your administrative staff can work on developing resources for those few who lack either. My experience is our patients rarely had to/wished to pay out of pocket.

The logistics of CVS are challenging, but luckily very few of our patients have requested CVS. For the 2 requests I've had, one was able to be scheduled in Seattle, the other was too late (13+ wks) to get scheduled and so had a 15 wk amniocentesis.

CVS can be technically challenging and has a 2.6% post procedure loss rate. Like anything else, if you don't do it regularly, you are not the best to do it. Some providers perform "early" (12-14 wks) amniocentesis, but the post-amniocentesis loss rate there is also high (2.5% before 15 wks vs. 0.5% after 15 wks), so I don't feel that is an acceptable alternative.

*How about screening for neural tube defect (NTD) in patients who've had 1st trim screening?

➔

➔ While the AFP (which is only 65% sensitive for NTD) cannot be ordered separately from the quad screen, the 18 wk anatomy scan is 90+% sensitive for the detection of neural tube defect, so if they've had 1st trim screening, they don't need a quad screen for the AFP if they have an anatomic survey.

Resources

Prenatal Genetic Screening – Serum and Ultrasound (use as a resource or for CME/CEUs)
www.ihs.gov/MedicalPrograms/MCH/M/TM01.cfm

Berkowitz RL, et al Aneuploidy screening: what test should I use? Obstet Gynecol. 2006 Mar;107(3):715-8.

Another Perinatology Picks Topic:

Misoprostol for postpartum hemorrhage

Here is a Letter to the Editor that Dr. Gilson recently sent to Contemporary OB/GYN

Re: Misoprostol for postpartum hemorrhage
To the Editor:

I would like to compliment Dr. Francois on her excellent review, "Managing uterine atony and hemorrhagic shock" in the February 2006 Contemporary OB/GYN. I would however like to take issue with one inclusion in Table 4, "Uterotonic Therapy", where rectal misoprostol is recommended. Rectal misoprostol has pharmacokinetics very similar to vaginal misoprostol (1, 2). Rectal misoprostol does not achieve significant levels in plasma until approximately 60 minutes after administration, and even at that time, only achieves levels approximately 25% as high as those achieved with vaginal or oral misoprostol (2). It cannot therefore be expected to be effective in the urgent management of acute postpartum hemorrhage as the article implies. "Evidence" for its efficacy is largely derived from anecdotal reports and case series. Oxytocin, methylergonovine, and carboprost are all rapid-acting and readily available agents. The clinician should not waste precious time with the expectation that rectal misoprostol will help in the expeditious resolution of the hemorrhage. Most women are likewise not happy with this mode of administration. Thank you for your consideration of these comments.

Zieman M, Fong SK, Benowitz NL, Banskter D, Darney PD. Absorption kinetics of misoprostol with oral or vaginal administration. Obstet Gynecol 1997; 90:88-92.

Khan RU, El-Refaey H, Sharma S, Sooranna D, Stafford M. Oral, rectal, and vaginal pharmacokinetics of misoprostol. Obstet Gynecol 2004; 103:866-70.

Respectfully,
George J. Gilson, MD

OB/GYN CCC Editorial
Dr. Gilson raises an important point

Rectal misoprostol is a third line agent for the management of postpartum hemorrhage (PPH) due to its slow uptake and low peak levels. Rectal misoprostol has its greatest benefit in those low resource settings without IV access, or in the management of PPH in developed countries in the sub-acute setting.

The management of PPH should be conducted in an organized approach as a whole labor and delivery team. One excellent resource is the Advanced Life Support in Obstetrics (ALSO). I suggest all Indian Health maternity care providers attend and stay current with ALSO certification. Please sign up early and often.

Advanced Life Support in Obstetrics.
www.ihs.gov/MedicalPrograms/MCH/M/Pr01.cfm#AdvancedLifeSupport

Contemporary OB/GYN Home Page: February 2006 article
www.contemporaryobgyn.net/obgyn/

Family Planning

Fatal infection without fever: Sepsis and Medical Abortion—FDA Public Health Advisory

UPDATE: All four cases of fatal infection tested positive for Clostridium sordellii. In addition, FDA tested drug from manufacturing lots of mifepristone and misoprostol and found no contamination with Clostridium sordellii.

The Food and Drug Administration (FDA) is aware of four cases of septic deaths in the United States, from September 2003 to June 2005 in women following medical abortion with mifepristone (Mifeprex) and misoprostol. The bacteria causing sepsis has been identified in two of the cases as Clostridium sordellii. The other two cases are under ongoing investigation by FDA along with the Centers for Disease Control and Prevention, State and local health departments, and the manufacturer of Mifeprex. All cases involve the off-label dosing regimen consisting of 200 mg of oral Mifeprex followed by 800 mcg of intra-vaginally placed misoprostol. The two confirmed cases of Clostridium sordellii did not have the usual signs and symptoms of an infection. Although these deaths are reported from California, all providers of medical abortion and their patients need to be aware of the risks of sepsis. As more information becomes available, FDA will alert the public.

OB/GYN CCC Editorial

UPDATE: There have two more reported cases since the above report.

Though you may not be primarily prescribing medications for this purpose, Indian Health providers need to be aware of the complications our patients may return to your care with after receiving care outside our system. The side effects of misoprostol including vomiting, diarrhea, and abdominal cramping may be similar to the initial symptoms of toxic shock syndrome.

One needs to maintain a high index of suspicion as symptoms may not include fever, or other signs of infection. All four died 23 hours or less after presentation. Distinctive features include tachycardia, hypotension, edema, hemoconcentration, profound leukocytosis, and absence of fever.

In its public health advisory the FDA recommends that all emergency care providers investigate the possibility of sepsis in patients undergoing medical abortion and presenting with nausea, vomiting, or diarrhea and weakness with or without abdominal pain and with or without fever or other signs of infection more than 24 hours after taking misoprostol. To help identify patients with hidden infection, strong consideration should be given to obtaining a complete blood count.

Resources:

Greene MF. Fatal infections associated with mifepristone-induced abortion. N Engl J Med. 2005 Dec 1;353(22):2317-8.

Centers for Disease Control and Prevention (CDC). Clostridium sordellii toxic shock syndrome after medical abortion with mifepristone and intravaginal misoprostol--United States and Canada, 2001-2005. MMWR Morb Mortal Wkly Rep. 2005 Jul 29;54(29):724.

Medical management of abortion. ACOG Practice Bulletin No. 67. American College of Obstetricians and Gynecologists. Obstet Gynecol 2005;106:871–82.

Pharmacists' Knowledge, Attitudes, and Beliefs Toward Prescribing EC

Conclusion: New Mexico pharmacists have positive attitudes/beliefs toward EC prescribing; however, their knowledge in this area is average. Although religious, moral, and political views influence pharmacists' willingness to prescribe EC, factors such as education and practice environment must be addressed if more pharmacists are to accept this EC prescriptive authority.

Borrego ME, Short J, House N, Gupchup G, Naik GR, Cuellar D. New Mexico Pharmacists' Knowledge, Attitudes, and Beliefs Toward Prescribing Oral Emergency ContraceptionJ Am Pharm Assoc. 2006;46(1):33-43

OB/GYN CCC Editorial

Although Borrego et al report positive attitudes/beliefs toward EC prescribing, when Espey et al sent two research assistants posing as women needing EC their access to EC was not as positive.

METHODS: Two research assistants posed as women needing emergency contraception. They visited 89 pharmacies in Albuquerque, New Mexico, presenting a prescription for either Plan B or Preven. The assistants recorded the availability of the products in the pharmacies. When the product was not in stock, the research assistants asked pharmacy providers why the products were not carried. Fisher exact test was performed to compare categoric data.

RESULTS: Plan B and Preven were in stock at only 19 visits (11%). Of the pharmacies that did not stock the products, 53% reported they could obtain Plan B or Preven within 24 hours. The most common reason cited by pharmacy providers for not stocking Plan B or Preven was the lack of prescriptions received for them (65%).

CONCLUSION: Plan B and Preven were not in stock at the majority of pharmacies in a moderately sized metropolitan area. Lack of availability at the pharmacy constitutes a major barrier to emergency contraception access.

Espey E, Ogburn T, Howard D, Qualls C, Ogburn J. Emergency Contraception: Pharmacy Access in Albuquerque, New Mexico. Obstet Gynecol. 2003 Nov;102(5 Pt 1):918-21

A good web site for other Emergency Contraception resources, "Not-2-Late.com" at **http://ec.princeton.edu/info/ecminip.html**

Medical Mystery Tour

As seen on TV: Desperate Housewives—Wandering spleen

If you, or any of your family members, happened to inadvertently watching Desperate Housewives on 2/12/06, you might have wondered what a 'wandering spleen' really is.

If by chance you happen to have missed just this one particular episode, one of the characters on the program had been recently been diagnosed with a wandering spleen and was trying 'desperately' to get married quickly so she could get health insurance.

Comments about our health insurance system and the increasing number of uninsured Americans aside (see below), the character related that she was told that her spleen could crash into her heart at any time. It has been a month since that episode and I presume you have been on the edge of your seat since then, so here finally is the rest of the story.

Congenital wandering spleen is a very rare, randomly distributed, birth defect characterized by the absence or weakness of one or more of the ligaments that hold the spleen in its normal position in the upper left abdomen. The disorder is not genetic in origin. Instead of ligaments, the spleen is attached by a stalk-like tissue supplied with blood vessels (vascular pedicle). If the pedicle is twisted in the course of the movement of the spleen, the blood supply may be interrupted or blocked (ischemia) to the point of severe damage to the blood vessels (infarction). Because there is little or nothing to hold it in place the spleen "wanders" in the lower abdomen or pelvis where it may be mistaken for an unidentified abdominal mass.

Symptoms of wandering spleen are typically those associated with an abnormally large size of the spleen (splenomegaly) or the unusual position of the spleen in the abdomen. Enlargement is most often the result of twisting (torsion) of the splenic arteries and veins or, in some cases, the formation of a blood clot (infarct) in the spleen.

"Acquired" wandering spleen may occur during adulthood due to injuries or other underlying conditions that may weaken the ligaments that hold the spleen in its normal position (e.g., connective tissue disease or pregnancy).

OB/GYN CCC Editorial

Yes, on the one hand, the character was correct that her spleen may be loosed tethered in its current location, but it would have 'crashed' into her mediastinum. On the other hand, another term for this phenomenon is 'pelvic spleen' so we should be aware of this as a possible cause of an unknown pelvic mass. Other terms for this phenomenon are: Displaced Spleen, Drifting Spleen, Floating Spleen, Splenic Ptosis, Splenoptosis, and Systopic Spleen.

The wandering spleen syndrome is also a rare cause of acute abdominal pain that is most typically seen in younger adolescents and children, although it can occur in adults. Patients typically present with acute left upper quadrant pain associated with an abdominal mass. CT imaging confirms the diagnosis. The treatment of choice is splenopexy; splenectomy may be required if the spleen is infarcted and there is torsion and absence of splenic blood flow.

Fun facts about wandering spleens aside, the real issue here is the extent to which this character, and many patients in the U.S., had to go to get adequate health care.

Unfortunately, due to economic factors there are increasingly more uninsured patients. While this may not directly effect our AI/AN patients it will affect their partners, if their partner is non-Native, and hence our greater tribal family systems. It also has downstream Indian Health funding effects on AI/ANs as the uninsured patients stress an already stressed Medicaid and Medicare system. As health professionals we should continue to educate our colleagues, the public, and our legislative representatives that health care is an important investment for a productive society.

Below is an insightful document from the ACOG Committee on Health Care for Underserved Women:

Resources

The uninsured. ACOG Committee Opinion No. 308. American College of Obstetricians and Gynecologists. Obstet Gynecol 2004;104:1471–4.

STD Corner

Lori de Ravello, National IHS STD Program

Incorrect use of condoms, not product failure, may account for the lack of effectiveness

Assessing the correct and consistent use of condoms is important in evaluating condom effectiveness. Incorrect use of condoms and not product failure may account for the lack of effectiveness when condoms are used to reduce the risk of contracting STDs.

Paz-Bailey G, et al. The effect of correct and consistent condom use on chlamydial and gonococcal infection among urban adolescents. Arch Pediatr Adolesc Med June 2005;159:536-42

Navajo News

Jean Howe, Chinle

VZIG No Longer Available

CDC suggests temporary unlicensed solution….yet another reason to protect non-pregnant non-immune women against Chickenpox

Inevitably, at 5pm on Friday, the patient says, "I'm pregnant, my 4 year old has chicken pox, and my mother says that I never had it when I was a child. Should I be worried?"

Thankfully, with increasing use of varicella vaccine in children and non-immune adults, this scenario is becoming much less common. But varicella exposure of non-immune pregnant women still occurs and is now more challenging to manage as the company that manufactured varicella zoster immune globulin (VZIG) has recently discontinued production.

Varicella zoster virus is transmitted by respiratory droplets and close contact and is highly contagious with 60-90% of susceptible people becoming infected after contact. The period of infectivity is from 48 hours before the rash appears until the last vesicles crust over. The incubation period is from 10 to 20 days (average 14 days). Infection with varicella confers life-long immunity. Because of the high prevalence of immunity in adults; varicella infection in pregnancy is quite rare. Although the disease course is often mild in children, affected adults may become gravely ill with complications including pneumonia and encephalitis. If acquired in the first 20 weeks of pregnancy, there is a small (<2%) risk that the fetus will develop congenital varicella syndrome. Infection around the time of delivery is also especially risky for the neonate; if a mother develops chicken pox from 5 days before until 2 days after giving birth, the neonate will lack protective maternal antibodies and is especially at risk.

If a pregnant woman describes a recent possible exposure to varicella, careful questioning will usually elicit a history of chickenpox infection in the past. Of women who do not recall a history of chickenpox, 70-90% will still have detectable antibodies. If antibody testing is available in a timely manner, this will often confirm that no further intervention is needed. If antibody testing is unavailable or indicates that the patient is susceptible to varicella, then administration of VZIG within 72 hours of exposure is recommended.

With VZIG now unavailable, the CDC has recommended consideration of the use of VariZIG, which is only available under an "Investigational New Drug Application Expanded Access Protocol" from a sole U.S. distributor. VariZIG is a purified human immune globulin preparation prepared from plasma with high levels of anti-varicella antibodies. It is very similar to VZIG but is lyophilized. Because it is only available under IND protocols, informed consent must be obtained prior to use. ACIP has recommended that the following groups of non-immune exposed patients receive VariZIG:

- Immunocompromised patients.
- Pregnant women.
- Neonates whose mothers have signs and symptoms of varicella infection from 5 days before to 2 days after delivery.
- Premature infants born at >28 weeks gestation and exposed in the neonatal period whose mothers are non-immune.
- Premature infants born at <28 weeks (or <1000g) and exposed in the neonatal period regardless of maternal immune status.

Treatment should be given as soon as possible; efficacy more than 96 hours after exposure is unknown. If VariZIG cannot be obtained, administration of intravenous immune globulin may be considered. If no treatment is undertaken, close observation and early treatment with acyclovir for any resulting infection is indicated. Post-exposure prophylaxis for those not included in the above high risk groups can be accomplished with prompt varicella vaccination.

ACOG recommends vaccination of nonpregnant women of childbearing age if no history of previous chickenpox infection is elicited. The loss of ready access to VZIG only increases the utility of this intervention. Procuring VariZIG in a timely manner is likely to be difficult for even large urban facilities; getting post-exposure prophylaxis to a woman seeking care at a rural site such as those served by many Indian Health Service facilities will be especially challenging.

CDC, A new product (VariZIG) for postexposure prophylaxis of varicella available under an Investigational New Drug Application Expanded Access Protocol, MMWR Early Release February 24, 2006, Volume 55.

American College of Obstetrics and Gynecology, Perinatal Viral and Parasitic Infections, ACOG Practice Bulletin #20, September 2000. Int J Gynaecol Obstet. 2002 Jan;76(1):95-107.

American College of Obstetrics and Gynecology, Immunization During Pregnancy, ACOG Committee Opinion #282. Obstet Gynecol. 2003 Jan;101(1):207-12.

OB/GYN CCC Editorial

Dr. Howe raises an excellent point when she says ….yet another reason to protect non-pregnant non-immune women of childbearing age against Chickenpox.

Here are a few other thoughts

- As Chickenpox is becoming relatively less frequent, one would have to vaccinate a relatively larger number of women, to prevent one perinatal case.
- Many women without a history of chickenpox will have antibodies from non-clinical infection, so we should screen for varicella antibody titer in all women without a history of chicken pox before immunizing them.
- As we don't want to vaccinate pregnant women, we should perform antibody testing when possible.

(Reduction in diabetes..., continued from page 1)

resistance as well. It is highly unlikely that we will see additional studies of this size addressing this issue. Hopefully the diabetes risk data from the estrogen only arm of the WHI will be published soon.

While public attention his focused on other findings of these studies the change in diabetes incidence may be of greater clinical significance. As Type II DM is such a common disease in AI/AN we should include this information in our counseling.

We do not recommend taking hormone replacement for the purpose of disease prevention, even though we know that it is effective at least for osteoporosis, hip fracture and colon cancer. We know that colon cancer is increased to nearly double the prevalence in some AI/AN. Currently it is reasonable to prescribe hormone replacement for the treatment of menopausal symptoms after a discussion of the risks and benefits.

The decreased incidence of Type II DM should now become a routine part of that discussion.

OB/GYN CCC Editorial

Thanks to Dr. Burke for pointing out a possible bias which appears to overlook the benefits of hormone therapy (HT), while emphasizing the negative effects of HT. Another example is referenced below. In the estrogen alone trial, estrogen decreased coronary heart disease risk among women 50 to 59 years of age at baseline.

Our goal should be to present balanced non-judgmental counseling to our AI/AN patients.

Hsia J, et all Conjugated Equine Estrogens and Coronary Heart Disease: The Women's Health Initiative. Arch Intern Med. 2006 Feb 13;166(3):357-65.

(Child Health Notes, continued from page 3)

reflexive, and rigorous science capable of generating evidence useful for rectifying—rather than perpetuating—social disparities in health." It is my belief that we should be cautious when it comes to the "promise" of genomics. We cannot lose track of what we already know, that health disparities are in their largest part born out of socially imposed inequities and injustices in exposure and access to resources, lest we forget what we are really after: the elimination of health disparities by the year 2010 (Healthy People 2010: Understanding and Improving Health. 2nd ed. Washington, DC: US Dept of Health and Human Services; November 2000. http://www.healthypeople.gov/).

Articles

Bridging the Gaps Between Race and Genetics. Am J Public Health, Dec 2005; 95: 2124

The role of race and genetics in health disparities research. Am J Public Health. 2005 Dec;95(12):2125-8.

Racializing drug design: implications of pharmacogenomics for health disparities. Am J Public Health. 2005 Dec;95(12):2133-8.

Genomics and the public health code of ethics. Am J Public Health. 2005 Dec;95(12):2139-43.

Stormy weather: race, gene expression, and the science of health disparities. Am J Public Health. 2005 Dec;95(12):2155-60.

Here's an article I came across that is representative of research that, in my opinion, is irrelevant and should be tempered by the above discussion.

Genomic Screen for loci associated with tobacco usage in Mission Indians. BMC Med Genet. 2006 Feb 10;7(1):9 [Epub ahead of print].

Announcements from the AAP Indian Health Special Interest Group

Sunnah Kim, MS

Locums Tenens and Job Opportunities

If you have a short or long term opportunity in an IHS, Tribal or Urban facility that you'd like for us to publicize (i.e. AAP Web site or complimentary ad on Ped Jobs, the official AAP on-line job board), please forward the information to

indianhealth@aap.org

or complete the on-line locum tenens form at

www.aap.org/nach/locumtenens.htm

SAVE THE DATES

18th Annual IHS Research Conference

- April 24–26, 2006
- Albuquerque, NM
- Discovering Pathways to Better Health for AI/AN
- **www.ihs.gov/MedicalPrograms/ClinicalSupportCenter/index.cfm**

Native Peoples of North America HIV/AIDS Conference

- May 3–6, 2006
- Anchorage, Alaska
- Embracing Our Traditions, Values, and Teachings
- **www.embracingourtraditions.org**

Advances in Indian Health, 6th Annual

- May 2–6, 2006
- Albuquerque, NM
- Save the dates brochure **www.ihs.gov/MedicalPrograms/MCH/F/CN01.cfm#May06**

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Abstract of the Month

- Reduction in diabetes incidence with combination hormone replacement

IHS Child Health Notes

- Cardiovascular screening of student athletes.
- Medical and legal issues in the cardiovascular evaluation of competitive athletes.
- RotaTeq™ (Rotavirus vaccine) newly licensed for infants
- Recent literature on American Indian/Alaskan Native Health—Race, Genetics, and the Biologic Versus Social Determinants of Health and Health Disparities

Hot Topics

- Obstetrics—GDM: Can we proceed directly to one step screening/diagnosis in AI/AN women?
- Gynecology—Diet and Exercise Reduce Incontinence in Women at Risk of Diabetes
- Child Health—FDA Warns Parents About Contaminated Teething Rings
- Chronic Illness—American Heart Association Updates Guidelines for Blood Pressure Management

Features

- Ask a Librarian—Library Services for the Indian Health Service
- Midwives Corner—Should we continue to draw Rubella titers as part ofthe prenatal panel?
- Oklahoma Perspective—Metformin and Polycystic Ovarian Syndrome
- Perinatology Picks—Move beyond 'integrated' screening to 'contingency' screening
- Another Perinatology Picks Topic—Misoprostol for postpartum hemorrhage
- Family Planning—Fatal infection without fever: Sepsis and Medical Abortion
- Medical Mystery Tour—As seen on TV: Desperate Housewives...Wandering spleen
- STD Corner—Incorrect use of condoms, not product failure, may account for the lack of effectiveness
- Navajo News—VZIG No Longer Available