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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Protein to Creatinine Ratio in Pre-eclampsia:

Is the data preceding the U.S. benchmarks?

BACKGROUND: Proteinuria is recognized as an independent risk factor for cardiovascular and renal disease and as a predictor of end organ damage. The reference test, a 24-h urine protein estimation, is known to be unreliable. A random urine protein:creatinine ratio has been shown to correlate with a 24-h estimation, but it is not clear whether it can be used to reliably predict the presence of significant proteinuria.

METHODS: We performed a systematic review of the literature on measurement of the protein:creatinine ratio on a random urine compared with the respective 24-h protein excretion. Likelihood ratios were used to determine the ability of a random urine protein:creatinine ratio to predict the presence or absence of proteinuria.

RESULTS: Data were extracted from 16 studies investigating proteinuria in several settings; patient groups studied were primarily those with preeclampsia or renal disease. Sensitivities and specificities for the tests ranged between 69% and 96% and 41% and 97%, respectively, whereas the positive and negative predictive values ranged between 46% and 95% and 45% and 98%, respectively. The positive likelihood ratios ranged between 1.8 and 16.5, and the negative likelihood ratios between 0.06 and 0.35. The cumulative negative likelihood ratio for 10 studies on proteinuria in preeclampsia was 0.14 (95% confidence interval, 0.09-0.24).

CONCLUSION: The protein:creatinine ratio on a random urine specimen provides evidence to "rule out" the presence of significant proteinuria as defined by a 24-h urine excretion measurement.

Price CP, Newall RG, Boyd JC. Use of protein: creatinine ratio measurements on random urine samples for prediction of significant proteinuria: a systematic review. Clin Chem. 2005 Sep;51(9):1577-86.

OB/GYN CCC Editorial

with Jonathan Steinhart, Shiprock and Jean Howe, Chinle

What would you do if you worked in an Indian Health facility that was 2 hours away from a Level III nursery and a 30 week EGA patient presented with a blood pressure of slightly greater than 140/90 x 2 separated by 6 hours, a clean catch urine dipstick of 1+, and a mild headache?

One of the possible scenarios would include hospitalizing the patient in your facility and beginning a 24 hour urine collection for protein. Unfortunately the 24 hour urine collection is one of the most notoriously incomplete samples that we routinely encounter, especially in the outpatient setting. It is estimated that 10-20% of specimens are incomplete and should be discarded because of the difficulties associated with obtaining a complete collection, particularly in the outpatient setting. In addition, in some of our remote facilities a 24 hour protein test is a 'send out' test and it only gets sent out at noon on weekdays. Invariably, the collection for your patient is finished on Friday afternoon or Saturday morning.

The second issue is that pre-eclampsia can have a rapidly progressive course and waiting 24-36 hours for a diagnosis when definitive neonatal care is a 2 hour transport time away can mean the difference between an orderly transport of a stable maternal/fetal unit versus the emergent delivery of significantly preterm infant in a remote facility without adequate neonatal support.

Another scenario for the same patient would include performing a random spot urine protein to

(continued on page 15)

THIS MONTH

Out with the Winter Solstice icy blue and in with the verdant green for the Vernal Equinox. Twice a year, day and night become equal in length. The ancient goddess, Eostre, a Saxon deity of new life and fertility, was the key symbol of the Ostara celebration which became Easter.

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

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

IHS Child Health Notes

April 2006

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

"It ain't what people don't know that's so dangerous, it's what people know that just ain't so."
—Will Rogers

Articles of Interest

Hearing thresholds and tympanic membrane sequelae in children managed medically or surgically for otitis media with effusion. Arch Pediatr Adolesc Med. 2005 Dec;159(12):1151-6.

Long-term sequelae of ventilating tubes: implications for management of otitis media with effusion. Arch Pediatr Adolesc Med. 2005 Dec;159(12):1183-5

- A 10 year follow-up of children who were randomized to either medical or surgical treatment for persistent otitis media with effusion (OME)
- Surgical treatment was with ventilating tubes which were removed after 12 months
- Medical treatment was with low dose sulfisoxazole for 6 months
- The risk of long term tympanic membrane abnormalities (sclerosis, retractions, perforations) was 4.4 times higher in the group which had ventilation tubes placed
- Hearing thresholds were 2.1 to 8.1dB higher in children who had undergone placement of tubes
- The risk of mild permanent hearing loss (>15dB) was 3.3 times higher in the group which received ventilating tubes
- Parental reports of hearing and speech and school success were equal in both groups

Editorial Comment

Ventilating tubes (VT) have long been considered an acceptable treatment for persistent OME. The AAP "Clinical Guidelines on "Otitis Media with effusion" published in 2004 list OME > 4 months as one possible indicator for surgical placement of VT. This recommendation is based on a decrease in the number of days with effusion and improved hearing levels of 6 to 12 dB in children while VT remain in place.

VT may provide the short term physiologic benefits described above but they do not demonstrate any long-term benefit in terms of functional outcomes in normal children with OME. Children with OME followed to age 5 years have similar outcomes in hearing and speech whether they have had medical therapy or surgical therapy in their younger years. Unfortunately, as the above study shows, VT placement is likely to result in a much greater risk of permanent tympanic membrane damage and functional hearing loss in children.

The 2004 AAP guideline does stress in other sections that "watchful waiting" may be an acceptable plan for asymptomatic children with OME. Given the potential harm of VT it seems prudent to only recommend surgical treatment for children with high risk conditions (Down syndrome or cleft lip), documented speech delay or significant hearing loss which is usually defined as > 40dB. In these groups the risk/benefit ratio will favor surgical intervention in spite of the documented long-term risks.

Recent literature on American Indian/ Alaskan Native Health

Doug Esposito, MD

Redeeming Hollow Promises: The Case for Mandatory Spending on Health Care for American Indians and Alaska Natives.

Am J Public Health. 2006 Feb 28

Summary

The authors describe in detail the federal funding process for Indian health programs as compared to other government health programs. They discuss the "discretionary" funding structure of AI/AN programs, and compare that with "mandatory" spending for Medicare and Medicaid, presenting the shocking (but not surprising) statistics of under funding. In 1999, according to the Level of Need Funded Workgroup of the IHS, funding occurred at 54% of what was needed. Several recommendations are made that if enacted, would, in the authors' opinion, significantly narrow the funding gap and by extension, allow for meaningful reductions in AI/AN health disparities. These include treating funding for AI/AN health programs as "mandatory" rather than "discretionary," automatically adjusting funding for inflation in order to preserve purchasing power, and making funding rates for AI/AN programs comparable to other government programs. Caution is offered, reflecting pessimism surrounding the present political climate and the will and ability of Congress to address this problem in any meaningful or productive way.

Editorial Comment

I believe that this is a landmark paper, written by lawyers with health policy backgrounds, who appear to be motivated by a passion for social justice. Although the data is not new or earth shattering, a uniquely cogent, well organized, and logical argument calling for changes in the funding structure for Indian Health is made that even I can follow! Hopefully, this article will find its way into the hands of the right people, and help to change the minds of our legislators. Please read this article, and pass it along. Everyone associated, even loosely, with AI/AN Health should have an opportunity to become familiar with the content of this report.

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➔ Endemic iron deficiency associated with Helicobacter pylori infection among school-aged children in Alaska.

Pediatrics. 2006 Mar;117(3):e396-404. Epub 2006 Feb 1.

Summary

Arctic populations are known to have high rates of iron deficiency that approximate those seen in the developing world, despite subsistence diets relatively high in iron and low levels of intestinal parasitosis. High rates of H. pylori infection are also reported in these same regions.

In this study, the authors confirm a high prevalence of iron deficiency (38%), iron deficiency anemia (7.8%), and active H. pylori infection (86%) among approximately 700 school-age Yupik children residing in remote western Alaska. They link as an independent variable active H. pylori infection with iron deficiency and iron deficiency anemia in these children. Although causality could not be definitively established due to the cross-sectional study design, they conclude that H. pylori infection might be an important risk factor for iron deficiency in this population of children who should otherwise be at low risk for this micronutrient deficiency.

"They link as an independent variable active H. pylori infection with iron deficiency and iron deficiency anemia in these children."

Strengths of the study are large subject numbers, a high participation rate, and a population-based, cross-sectional design. Additionally, a validated method was used to diagnose active H. pylori infection, in contrast to most other studies in children which have relied on a serologically derived case definition. The authors point out that serologic testing is insensitive and non-specific in children, in addition to having an inability to differentiate between active and past infection.

Editorial Comment

Yet again, an important study reporting interesting and relevant data with broad implications for those of us serving AI/AN populations emerges, thanks to the CDC Artic Investigations Program in Anchorage, Alaska. What is the prevalence of active H. pylori infection among the specific population of children served in you practice? I searched PubMed briefly to find out, and identified only a couple of reports dealing with groups other than those residing in Arctic regions. All of these reports employed either serologic or stool antigen derived case definitions, with the associated limitations, and had variable study objectives. Active infection rates unfortunately were not the objective of any of these studies. Two of these papers are cited below for the interested reader.

It is unfortunate that few H. pylori investigations have been done in other Native communities in the U.S. Given comparable levels of poverty, crowding, sanitation, etc., that occur in the populations we all serve, one might presume similarities in H. pylori epidemiology and its association with iron deficiency. Our collective clinical experience serves to further strengthen these suspicions. Alas, we will just have to wait for additional studies to be done to confirm these concerns.

The authors make an important side point worth reiterating. The diagnosis of active H. pylori infection in children is difficult and fraught with significant challenges. The gold standard for diagnosis is biopsy-proven evidence of the bacterium on stained tissue samples obtained from endoscopic examination of the stomach and proximal duodenum. Serologic testing is frequently used in clinical practice as a surrogate to this invasive procedure due to its relative ease of collection and low cost. Unfortunately, serology is highly inaccurate in this setting. Cautious use and interpretation of results obtained from this increasingly popular and potentially misused method is certainly warranted.

Will treatment of H. pylori infected iron deficient children result in improvement in their iron status? Two reports have been published by the Arctic Investigations Program reporting the results of this arm of their study, although I could not properly review them on short notice. I was able to communicate briefly with Dr. Baggett, a co-author of both of these reports (cited below) and learned that no effect on iron deficiency was found after treatment of H. pylori. A whole host of explanations can be posited for this finding, but the details will have to wait until the next installment of this column. Can you wait that long? Drum roll, please!

Additional Reading

Helicobacter pylori infection in children: recommendations for diagnosis and treatment. J Pediatr Gastroenterol Nutr. 2000 Nov;31(5):490-7.

Age at acquisition of Helicobacter pylori in a pediatric Canadian First Nations population. Helicobacter. 2002 Apr;7(2):76-85.

Transient and persistent Helicobacter pylori colonization in Native American children.J Clin Microbiol. 2003 Jun;41(6):2401-7.

A controlled, household-randomized, open-label trial of the effect that treatment of Helicobacter pylori infection has on iron deficiency in children in rural Alaska. J Infect Dis. 2006 Feb 15;193(4):537-46. Epub 2006 Jan 12.

A randomized trial of triple therapy for pediatric Helicobacter pylori infection and risk factors for treatment failure in a population with a high prevalence of infection. Clin Infect Dis. 2005 Nov 1;41(9):1261-8. Epub 2005 Oct 4.

From your Colleagues

Chuck North, Albuquerque

RCTs: do they have external validity for patients with multiple co-morbidities?

CONCLUSIONS: Results from this study suggest that RCTs targeting a chronic medical condition such as hypertension could find that, in a sample taken from family practice, most eligible patients have comorbid conditions. Whether these patients are sampled or excluded should be reported. Research results intended to be applied in medical practice should take the complex reality of effective treatment of these patients into consideration.

Fortin M, et al Randomized controlled trials: do they have external validity for patients with multiple comorbidities? Ann Fam Med. 2006 Mar-Apr;4(2):104-8.

Starfield B. Threads and yarns: weaving the tapestry of comorbidity. Ann Fam Med. 2006 Mar-Apr;4(2):101-3.

Family Medicine CCC Editorial

This issues raised are relevant to our use of guidelines to assess physician performance in diabetes, heart disease and other GPRA type measurements including "pay for performance". Starfield discusses the role of specialists vs. primary care clinician's use of guidelines. The issues raised deserve attention by our clinical leaders as we continue to develop measurable improvements in the practice of medicine, especially in primary care. I would appreciate your comments.

Alan Waxman, Albuquerque

FDA Approves New Imaging System to Help Detect Cervical Pre-Cancer

The Food and Drug Administration today approved a new imaging system that can help detect a cervical cancer precursor, an indication of possible cancer development, by identifying sites on the cervix that may contain pre-cancerous cells.

The LUMA Cervical Imaging System, manufactured by MediSpectra, Inc. of Lexington, Mass., is intended to be used along with colposcopy, a high magnification evaluation of the cervix for women who have recently had an abnormal Pap test. The firm's study showed that the new device can detect additional cancer precursors missed by colposcopy. Of the 50 cases of pre-cancer detected in the study, colposcopy caught 41 cases of cervical pre-cancer and LUMA caught an additional 9 cases of cervical pre-cancer that colposcopy had missed.

"Cervical cancer is one of the few highly preventable cancers. The early detection and removal of pre-cancerous cervical lesions reduces the risk of developing invasive cervical cancer," said Daniel Schultz, M.D., Director, Center for Devices and Radiological Health. "The approval of this imaging system gives health care providers an additional tool to help detect cervical cancer precursors and identify pre-disease that may have been missed by a colposcopy."

The LUMA Cervical Imaging System shines a light on the cervix and analyzes how different areas of the cervix respond to this light. The LUMA Systems assigns a score to tiny areas of the cervix and produces a color map that helps the doctor decide where to biopsy. The colors and patterns on the map help the doctor distinguish between healthy tissue, and potentially diseased tissue.

www.medispectra.com/detection/detection.html

A doctor will first perform a colposcopy and identify areas on the cervix to biopsy. The doctor will then evaluate the LUMA image to see whether or not there are additional areas of the cervix that should be biopsied. Only after both the colposcopy and LUMA procedures are completed does the doctor perform the biopsies.

FDA's approval was based on data from the firm's clinical study of 193 women who underwent colposcopy, followed by LUMA. FDA's analysis showed that the device is safe and effective and that - when used along with colposcopy - the LUMA system will help detect additional cervical cancer precursors. Use of the LUMA device is not a substitute for a thorough colposcopic exam.

www.medgadget.com/archives/2006/03/luma_cervical_i_1.html

OB/GYN CCC (Ret.) Editorial

A number of companies have been working on spectroscopy devices as an adjunct to cervical cancer screening. MediSpectra is the first to have FDA approval. The rationale for such a device is the less than desired sensitivity or colposcopy. The NCI-sponsored ALTS study found the sensitivity of colposcopy to be disappointing Other studies published in the past few years have also called into question our ability to find the worst lesion on colposcopy. An adjunct procedure that uses objective measures to map out the cervix therefore has appeal. The LUMA system uses algorithms that integrate reflectance and florescence spectroscopy with video imaging to highlight areas the colposcopist may not have noted. Frequently a lesion is too small to detect visually.

The principle on which the system is based is that light has a characteristic spectroscopic signature when reflected from diseased tissues or as it causes tissue florescence from diseased tissues. The role of this product, its cost and cost-effectiveness still remain to be seen, but it's an exciting prospect that we may be able to increase the sensitivity of our ability to diagnose cervical dysplasia. (References online)

Hot Topics

Obstetrics

Glyburide is at least as effective as insulin therapy in treating gestational diabetes

CONCLUSION: In a large managed care organization, glyburide was at least as effective as insulin in achieving glycemic control and similar birth weights in women with GDM who failed diet therapy. The increased risk of preeclampsia and phototherapy in the glyburide group warrant further study.

Jacobson GF et al Comparison of glyburide and insulin for the management of gestational diabetes in a large managed care organization. Am J Obstet Gynecol. 2005 Jul;193(1):118-24.

OB/GYN CCC Editorial

Despite 2000 Langer's results, and that recent expert opinion has recommended glyburide as an alternative treatment, only 13 percent of physicians in a 2003 study reported using this medication as first-line therapy. Jacobson and associates evaluated the use of glyburide versus insulin in the treatment of women with gestational diabetes mellitus that has been unresponsive to diet therapy. A retrospective chart audit of women with gestational diabetes who required medication for control was performed for two years before the introduction of a glyburide protocol and for two years after the protocol was used.

Jacobson study mirrors our positive experience with glyburide since Langer's 2000 study. It is still important to document that glyburide is not FDA approved in your initial discussion with your patient.

Use the 'talk but not sing' rule: Physical activity predicts GDM risk

Women who are physically active before pregnancy are less likely to develop gestational diabetes mellitus (GDM). GDM risk also rises with the amount of pre-pregnancy television viewing. From the public health view, it is important for women of reproductive age to keep an active lifestyle.

Most studies of exercise have looked at its effects on chronic disease in middle-age and elderly women. Given that GDM is a risk factor for developing type 2 diabetes, the findings underscore the importance of physical activity for younger women as well. There's also evidence that GDM can increase a child's later risk of obesity and diabetes.

CONCLUSION: Our prospective study provides strong evidence that regular physical activity before pregnancy is associated with lower GDM risk.

Zhang C, et al A prospective study of pre-gravid physical activity and sedentary behaviors in relation to the risk for gestational diabetes mellitus. Arch Intern Med 2006;166:543-548.

OB/GYN CCC Editorial

Use the 'talk, but not sing' rule

As there is no randomized data on diet in the literature, then what other evidence-based helpful interventions are there? Exercise has randomized data to support its benefit in control of fasting and postprandial glucose. (Bung et al, Jovanovic-Peterson et al)

Roland Dyck et al describe a successful exercise program in Aboriginal women in Saskatoon, Saskatchewan. Alaska Native Medical Center has also instituted a successful exercise in pregnancy program.

An "exercise prescription" is something from which women with GDM should benefit. Something as simple as walking at a comfortable pace for 20-30 minutes after meals will usually favorably impact post-prandial glucose values and result in lower birth weight if done as part of a regular regimen. The patient's exercise activity level should allow the patient to 'talk, but not sing'.

Calcium reduced severity, maternal morbidity, and neonatal mortality in preeclampsia

CONCLUSION: A 1.5-g calcium/day supplement did not prevent preeclampsia but did reduce its severity, maternal morbidity, and neonatal mortality, albeit these were secondary outcomes

Villar J, et al World Health Organization randomized trial of calcium supplementation among low calcium intake pregnant women. Am J Obstet Gynecol. 2006 Mar;194(3):639-49.

OB/GYN CCC Editorial

This is confirmation of previous MCH webpage recommendations and Cochrane Library* reviews that patients from low calcium intake regions (Read as: Many AI/AN women) consider calcium supplementation to mitigate pre-eclampsia complications. The WHO study, above, now gives us a successful dosage range.

*Authors' conclusions: Calcium supplementation appears to reduce the risk of high blood pressure in pregnancy, particularly for women at high risk of gestational hypertension and in communities with low-dietary calcium intake. Optimum dosage and the effect on more substantive outcomes requires further investigation.

Citation: Atallah AN, Hofmeyr GJ, Duley L. Calcium supplementation during pregnancy for preventing hypertensive disorders and related problems. The Cochrane Database of Systematic Reviews 2002, Issue 1. Art. No.: CD001059. DOI: 10.1002/14651858.CD001059.

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Gynecology

Urinary Incontinence: Substantial economic costs and decrement in quality of life

METHODS: In a cross-sectional study at 5 U.S. sites, 293 incontinent women quantified supplies, laundry, and dry cleaning specifically for incontinence. Costs were calculated by multiplying resources used by national resource costs and presented in 2005 United States dollars ($2005).

CONCLUSION: Women with severe urinary incontinence pay $900 annually for incontinence routine care, and incontinence is associated with a significant decrement in health-related quality of life. Effective incontinence treatment may decrease costs and improve quality of life. LEVEL OF EVIDENCE: III.

Subak LL et al The "Costs" of Urinary Incontinence for Women. Obstet Gynecol. 2006 Apr;107(4):908-916.

Child Health

New article from Aberdeen Area
Infant Mortality Reviews in the Aberdeen Area: Strategies and Outcomes

The authors set out to determine the cause and manner of deaths in the Aberdeen Area of the Indian Health Service from 1998 to 2002 and identify risk markers for infant mortality. They found that Sudden Infant Death Syndrome was the leading cause of infant death and accounted for 33% of infant deaths. Prematurity was the second leading cause and accounted for 22% of infants. The authors also found that infant mortality was recurrent; 32% of mothers of a deceased infant had another infant death.

The authors note that participation of tribal team members provides an important cultural and community perspective. The authors conclude that the reviews have been very helpful in public education. They say that quality improvement actions are underway on substance abuse, mental health/bereavement issues and reviews of fetal deaths.

Eaglestaff, ML et al. Infant Mortality Reviews in the Aberdeen Area of the Indian Health Service: Strategies and Outcomes. Public Health Reports. Volume 121 (March/April 2006) pp 140 - 148.

OB/GYN CCC Editorial

Kudos to the Aberdeen Area Perinatal and Infant Mortality Review (PIMR) Team!

Above is another article published in a national peer review journal that illustrates the excellent work the PIMR team is accomplishing. All Indian Health Areas and tribes should use the success of the Aberdeen Area as benchmark for best practice.

An important outcome of the PIMR has been the routine examination of infant deaths and the realization that patterns of risk factors are present," conclude the authors, adding that "additional research is urgently needed to determine why the rate of SIDS remains high in the AAIHS."

"By examining the data by cause of and age at death, we found significant differences that may be useful to other groups who are considering development of an infant death review committee," state the authors of an article published in the March-April 2006 issue of Public Health Reports. The Aberdeen Area Indian Health Service (AAIHS) has higher rates of infant mortality, especially of post-neonatal infant mortality, when compared to the overall U.S. rate and the overall Indian Health Service (IHS) rate. To improve the classification of the cause and manner of infant death and to identify preventable causes of infant death, the Aberdeen Area Perinatal and Infant Mortality Review (PIMR) was established. The article reports data on 5 consecutive years of infant death reviews from the AAIHS PIMR. A discussion of the benefits of a systematic infant mortality review in communities with high infant mortality rates is also included.

Data for the review were drawn from death certificates sent by the four states in the AAIHS and from information that IHS service units and committee members identified by reviewing obituaries from multiple regional newspapers, death certificates by race, and reports from regional referral centers. Case reviews for 148 consecutive infant deaths from 1998 to 2002 were examined as summary data for the total group, by mortality category, and by three age-of-death categories.

The authors found that

- Nearly two-thirds of the infants who died were males (ratio: 1.8 to 1).
- Nearly one-third of the infants (32%) had a previous sibling death.
- The PIMR attributed 22% of the deaths to prematurity and 33% to SIDS.
- Infants who died from prematurity had significantly lower birthweights, shorter gestation, and younger age at death than infants who died from SIDS or other causes. Mothers of infants who died from prematurity had significantly fewer prenatal visits than mothers of infants who died from SIDS or other causes.
- Mothers of infants who died from SIDS were more likely to have begun prenatal care after the first trimester than mothers of infants who died from prematurity or other causes.
- Birthweights were significantly lower and gestation significantly shorter for infants who died in the first 3 weeks of life, compared with infants who died at older ages. Mothers of infants who died in the first 3 weeks of life had significantly fewer prenatal visits.
- Autopsies and death scene investigations were more likely to have been completed for older infants.

Adverse Childhood Events: Impact on chronic adult illness/Risk taking

Depression in Moms: Prevalence, Predictors, and Acting Out Among 3rd Grade Children examines factors related to depressive symptoms among mothers and explores the implications for acting out behavior in their third grade children. The research brief, produced by Child Trends, is based on data from the Early Longitudinal Study:

➔ Kindergarten Class of 1998-99, a nationally representative study of children who entered kindergarten in the fall of 1998. Earlier findings on maternal depression and child outcomes are highlighted to place the new analyses in a larger context. Analyses of the prevalence of depressive symptoms among mothers, the antecedents to these symptoms, and the intersection of these antecedents and symptoms with parenting and acting out behavior are summarized. Findings from repeat analyses among a subgroup of children from families with low incomes are also presented.
www.childtrends.org/files/MomDepressionRB.pdf

OB/GYN CCC Editorial

Ever noticed how adverse events from childhood can affect risk taking behavior or chronic illnesses (like depression) in later life?

If you think that is possible, or if you would ever want to hear more about that concept, then please join us on May 1, 2006 on that topic on the Primary Care Discussion Forum.

Go here

www.ihs.gov/MedicalPrograms/MCH/F/PCdiscForum.cfm#adverse

or see Primary Care Discussion Forum (page 11) for details.

Chronic Disease and Illness

Breast cancer study from PIMC

BACKGROUND: Breast cancer incidence and survival varies by race and ethnicity. There are limited data regarding breast cancer in Native American women.

METHODS: A retrospective chart review was performed of 139 women diagnosed with breast cancer and treated at Phoenix Indian Medical Center in Phoenix, AZ between January 1, 1982 and December 31, 2003. Data points included tribal affiliation, and quantum (percentage American Indian Heritage) along with patient, tumor, and treatment characteristics.

RESULTS: Most patients (79%) presented initially with physical symptoms. There were no significant differences based on tribal affiliation; however, higher quantum predicted both larger tumor size and more advanced stage at diagnosis. Obesity also significantly correlated with larger tumor size and more advanced stage. Treatment was inadequate in 21%; this was attributed to traditional beliefs, patient refusal, or financial issues.

CONCLUSIONS: When compared to national averages, Native American women presented at a later stage, underutilized screening, and had greater delays to treatment.

Tillman L, et al Breast cancer in Native American women treated at an urban-based Indian health referral center 1982-2003. Am J Surg. 2005 Dec;190(6):895-902.

Editorial comment: Carolyn Aoyama

Online is an extensive list of tips for improving mammography screening rates. I would appreciate it if you would review it and add any other pearls of wisdom that have made a difference in raising mammography screening rates in your setting.

Let me know Carolyn.Aoyama@ihs.gov.

Estrogen use after menopause does not increase breast cancer risk

CONCLUSIONS: Treatment with CEE alone for 7.1 years does not increase breast cancer incidence in postmenopausal women with prior hysterectomy. However, treatment with CEE increases the frequency of mammography screening requiring short interval follow-up. Initiation of CEE should be based on consideration of the individual woman's potential risks and benefits.

Stefanick ML et al Effects of conjugated equine estrogens on breast cancer and mammography screening in postmenopausal women with hysterectomy. JAMA. 2006 Apr 12;295(14):1647-57.

OB/GYN CCC Editorial

This is another important follow-up to last month's Abstract of the Month entitled *Tired of hearing only bad news from the Women's Health Initiative (WHI)?**

The Stefanick et al article shows another retrenchment from the initial series of WHI reports that showed primarily negative associations between hormone therapy and many chronic conditions. Hormone replacement is indicated for short term relief of menopausal symptoms, but we should also be prepared to counsel our patients about some of the positive effects and the lack of other negative effects of hormone therapy, e.g., Stefanik et al.

Featured Website

David Gahn, IHS Women's Health Web Site Content Coordinator

The MCH Frequently Asked Question (FAQ) site

This site offers over 425 answers to common questions about the care of women and children in the unique settings found in Indian Country. Answers include both a quick answer and then significant background and multiple resources and links.

The site is maintained frequently with 11 new FAQs this month and numerous existing FAQs being updated. There are 15 answers to questions on bilateral tubal ligation alone.

Go here to explore the frequently asked question page:
www.ihs.gov/MedicalPrograms/MCH/M/mchFaqs.cfm

Features

STD Corner

Lori de Ravello, National IHS STD Program

New CDC Fact Sheet on HPV in Men

In March, CDC produced an informative fact sheet on HPV in men that can be downloaded for distribution to patients from the CDC Division of STD Prevention's website at:
www.cdc.gov/std/HPV/STDFact-HPV-and-men.htm

ACOG

Less Invasive Management of Cervical Cytology Abnormalities in Adolescents

ABSTRACT: The management of abnormal cervical cytology in adolescents differs from that for the adult population in many cases. Certain characteristics of adolescents may warrant special management considerations. It is important to avoid aggressive management of benign lesions in adolescents because most cervical intraepithelial neoplasia grades 1 and 2 regress. Surgical excision or destruction of cervical tissue in a nulliparous adolescent may be detrimental to future fertility and cervical competency. Care should be given to minimize destruction of normal cervical tissue whenever possible. A compliant, health-conscious adolescent may be adequately served with observation in many situations.

OB/GYN CCC Editorial

Here is more about three of the key elements of the ACOG recommendations

What is an adolescent?

In regard to cervical cancer screening, based on the natural history data and the rarity of cervical cancer in the population of women younger than 21 years are considered adolescents.

Why should we treat adolescents differently than adults?

In natural history studies of adolescents with newly acquired HPV infection, the average length of detectable HPV is 13 months. In most adolescent patients with an intact immune system, an HPV infection will resolve within 24 months. Further evidence that the HPV infection will resolve without treatment comes from the high rates of resolution of CIN 1 and CIN 2, 70% and 50% respectively.

What is the recommendation on Cervical Intraepithelial Neoplasia 2 ?

Cervical intraepithelial neoplasia 2 is a significant abnormality that has classically required therapy. A variety of studies, including the ALTS trial, have demonstrated that this lesion may have a significant rate of resolution (up to 40%) in adults. This rate of resolution is suspected to be higher in adolescents. Based on these data and expert opinion, CIN 2 can be managed in adolescents with either observation or ablative or excision therapy. The adolescent patient who is monitored without therapy should be an individual deemed to be reliable regarding follow-up and have a good understanding of the nature of the abnormality and its risks. Follow-up can be individualized, with colposcopy or cytology every 4–6 months being a very conservative approach.

Evaluation and management of abnormal cervical cytology and histology in the adolescent. ACOG Committee Opinion No. 330. American College of Obstetricians and Gynecologists. Obstet Gynecol 2006;107:963–8.

New Guidelines Call for Restricted Use of Episiotomies

Summary of Recommendations and Conclusions

The following recommendation and conclusion are based on good and consistent scientific evidence (Level A):

- Restricted use of episiotomy is preferable to routine use of episiotomy.
- Median episiotomy is associated with higher rates of injury to the anal sphincter and rectum than is mediolateral episiotomy.

The following recommendation and conclusion are based on limited or inconsistent scientific evidence (Level B):

- Mediolateral episiotomy may be preferable to median episiotomy in selected cases.
- Routine episiotomy does not prevent pelvic floor damage leading to incontinence.

Episiotomy. ACOG Practice Bulletin No. 71. American College of Obstetricians and Gynecologists. Obstet Gynecol 2006;107:957–62.

Breastfeeding

Suzan Murphy, PIMC

Early feeding choice and obesity

Obesity has increased dramatically in all age groups throughout the United States, including our children. In 1999, the prevalence of childhood obesity and overweight in American Indian and Alaska Native (AI/AN) communities was estimated to be almost 2.5 times greater than general population. Recently, an I.H.S. study reported obesity rates among Northern Plains American Indian children to be almost half of all 5 year olds, and nearly one quarter for all children between the ages of 5-17. (1)

The long-term impact obesity is profound. Type 2 diabetes and other obesity related health problems have become common in schools. Other likely but unmeasured consequences of obesity like poor self esteem and depression are linked with numerous social and academic problems. Sadly, researchers suggest that children born today could have a shorter life expectancy than their parents because of this epidemic and its impact.

There are many programs working toward leaner tomorrows. One method supported by research is to encourage breastfeeding as the early infant feeding choice. Examples of studies include research by CDC reporting a 30% reduction in risk for 4 year olds if breastfeeding continued for 6 months or longer (2). Another large study of the US general population reported a 25% risk reduction in middle school age children who were mostly breastfed compared to those who were mostly formula fed in the first year. (3). While there are many possible confounders such as maternal smoking, parental obesity, low/large birth weight, with infrequent exception, breastfeeding duration and exclusivity is inversely related to risk of obesity/overweight.

Another way of looking at early feeding choices is that formula feeding may increase risk of obesity. So, for families who decide to formula feed, it may be especially important to provide counter measures to reduce risk – like being careful to avoid early overfeeding and encouraging healthy food and activity choices for their children.

1. Zephier, E et al. Increasing prevalences of overweight and obesity in Northern Plains American Indian children. Arch Pediatr Adolesc Med. 2006 Jan; 160(1):34:9

2. Grummer-Strawn LM et al. Does breastfeeding protect against pediatric overweight? Analysis of longitudinal data from the Centers of Disease Control and Prevention Pediatric Nutrition Surveillance System. Pediatrics. 2004; 113:e81-e86.

3. Gillman, MW et al. Risk of overweight among adolescents who had been breast fed as infants. JAMA. 2001; 285:2461-2467.

American Family Physician

Patient-Oriented Evidence that Matters (POEMS)

Sequential Testing Best Detects Down Syndrome

CLINICAL QUESTION: What is the most accurate screening approach for detecting Down syndrome during pregnancy?

SETTING: Outpatient (specialty)

STUDY DESIGN: Cohort (prospective)

BOTTOM LINE: The most accurate screening approach was sequential testing, which detected 95 percent of patients with Down syndrome with a 2.5 percent false-positive rate. The process: perform combined screening during the first trimester. If the screening result is positive, offer genetic testing; if negative, perform the quadruple test in the second trimester, and then offer genetic testing if that yields a positive result. Fully integrated testing (second-trimester quadruple test plus first-trimester nuchal translucency) is almost as accurate (95 percent detection and 4 percent false-positive results). The skill of the ultrasonographer in measuring nuchal translucency is key to these approaches.

(Level of Evidence: 1b)

Study Reference: Malone FD, et al. First-trimester or second-trimester screening, or both, for Down's syndrome. N Engl J Med November 10, 2005;353:2001-11

Obstetrics

Increasing Angle of Episiotomy Reduces Third-Degree Tear Risk

CONCLUSIONS: These results show that a larger angle of episiotomy is associated with a lower risk of third-degree tear and mediolateral episiotomy incisions should be made at as large an angle as possible to minimise the risk of sphincter disruption.

Eogan M, et al Does the angle of episiotomy affect the incidence of anal sphincter injury? BJOG. 2006 Feb;113(2):190-4.

Perinatology Picks

George Gilson, MFM, ANMC

No increase risk in neurodevelopment at 2 years of age: Vaginal breech < 3, 500 g

RESULTS: An Ages and Stages Questionnaire at 2 years of age was obtained in 183 of 203 children (90.1%). Twenty-eight percent of these children showed 1 or more abnormal Ages and Stages Questionnaire domains. There were no differences in the risk of having abnormal Ages and Stages Questionnaire domains between planned vaginal delivery and planned cesarean section (P = .99). There was, however, evidence of interaction between mode of delivery and birth weight, with significantly higher risk in neurodevelopmental delay in children with birth weight greater than 3500 g with planned vaginal birth (adjusted odds ratio for interaction term 3.37; 95% confidence interval 1.14 to 9.95). CONCLUSION: Based on the Ages and Stages Questionnaire results at 2 years of age, planned vaginal delivery is associated with an increased risk of neurodevelopmental delay at 2 years of age in term breech children with a birth weight greater than 3500 g.

Molkenboer JF et al Birth weight and neurodevelopmental outcome of children at 2 years of age after planned vaginal delivery for breech presentation at term. Am J Obstet Gynecol. 2006 Mar;194(3):624-9.

Editorial Comment: George Gilson

As the pendulum swings back toward breech vaginal delivery, now 6 years after the Hannah large multicenter breech RCT (Lancet 2000; 356:1375-83), one can take some satisfaction reading Molkenboer JF et al, can't one. The 2000 Hannah et al study concentrated only on short term effects and now 5 years later, it is beginning to appear the long term data shows a different trend.

Molkenboer JF et al combines with:

- Whyte et al's 2 year f/u study of Hannah (Whyte H et al AJOG 2004;191:864-71)
- Glezerman's 5 year analysis (Glezerman M AJOG 2006; 194:20-5)
- Eide MG, et al's 18 year follow up data (Eide MG Obstet Gynecol 2005; 105:4-11)
- Goffinet F, et al's 138 French and 36 Belgian maternity units (AJOG 2006 194(4):1002-11)

…to form a pattern in the literature which supports breech vaginal delivery in selected cases.

Valacyclovir at 36 weeks reduced the number of women with clinical HSV recurrences

No neonates had symptomatic congenital HSV infection before discharge or up to 2 weeks' postpartum, and no clinical or laboratory safety concerns were identified.

CONCLUSION: Administration of valacyclovir beginning at 36 weeks' gestation to women with a history of recurrent genital HSV reduced the number of women with subsequent clinical HSV recurrences.

Andrews WW, et al Valacyclovir therapy to reduce recurrent genital herpes in pregnant women. Am J Obstet Gynecol. 2006 Mar;194(3):774-81.

Editorial Comment: George Gilson

Here's this issue again. Interestingly, while the recurrences were less, the incidence of shedding, lesions when in labor, and cesareans was not different. No babies were affected but the power was too low to detect. They cite 8 references looking at acyclovir for this purpose which likewise did not decrease shedding. Just to remind the readership that this may not be a panacea and to still be vigilant with the babies.

Three manuscripts that examine the timing and cesarean rate with epidural analgesia

CONCLUSION: Initiation of epidural analgesia in early labor, following the first request for epidural, did not result in increased cesarean deliveries, instrumental vaginal deliveries, and other adverse effects; furthermore, it was associated with shorter duration of the first stage of labor and was clearly preferred by the women

Ohel G et al Early versus late initiation of epidural analgesia in labor: does it increase the risk of cesarean section? A randomized trial. Am J Obstet Gynecol. 2006 Mar;194(3):600-5.

CONCLUSION: Randomized trials showing no effect of EA on cesarean section (CS) rate lack external validity in much of North American practice. The limited data available suggest EA and low-dose oxytocin used together increase the CS rate. Early detection of dystocia and high-dose oxytocin augmentation should be considered for women receiving EA; those delivering in low-dose oxytocin settings should be advised of a probable increase in the likelihood of CS.

Kotaska AJ, et al Epidural analgesia associated with low-dose oxytocin augmentation increases cesarean births: a critical look at the external validity of randomized trials. Am J Obstet Gynecol. 2006 Mar;194(3):809-14.

Editorial—Timing of conduction analgesia in labor

In this issue of the Journal, Ohel et al, from Haifa, Israel, report a prospective randomized study of early versus late epidural analgesia in laboring nulliparous women at term.9 Using conventional continuous epidural infusion, women randomized to the early group received epidural immediately upon request if their cervix was less than 3 cm dilated (mean dilation 2.4 cm). Women randomized to the late group received intravenous narcotics until they achieved cervical dilation of 4 to 5 cm, at ➔

➔which time epidural analgesia was initiated (mean dilation 4.6 cm). Results included a significantly shorter time from study randomization to full dilation in the early epidural group. There were no significant differences between the groups in rates of cesarean section, indications for cesarean section, rates of instrumentation, duration of the second stage, or neonatal or maternal outcomes. Although overall patient satisfaction was the same, significantly more women would prefer to be in the early epidural group with their next labor. This important study follows a publication by Wong et al that reported no difference between early and late neuraxial analgesia.10 In Wong's study, women were randomized to early intrathecal with later epidural analgesia versus systemic analgesia with later epidural. This is a different protocol than that used by Ohel et al but was again an effort to evaluate the issue of timing of conduction analgesia. Wong was similarly unable to demonstrate any difference in cesarean delivery rate or other outcomes between their 2 groups. Previous reports from Chestnut et al, although somewhat methodologically challenged, reached similar conclusions to these recent studies.11 and 12 That is, early versus late conduction analgesia in nulliparous women does not appear to have an effect on the rate of cesarean delivery.

Where does this leave us and how should we counsel our patients regarding this important therapeutic modality? In light of these excellent studies, it is difficult to argue that epidural analgesia should be withheld from a woman who is requesting pain relief in labor. While such decisions should always be individualized, there should no longer be an arbitrary degree of cervical dilation necessary before such a decision is considered. No longer should a patient be made to feel guilty about her wish for pain relief early in labor, powerless in her choices or conflicted about the consequences of such a choice. Women should receive adequate pain relief when needed, as determined by the patient herself. What a concept—pain relief of real pain when requested. We all should now feel comfortable supporting this position for the patient in labor.

Nageotte M. Timing of conduction analgesia in labor. Am J Obstet Gynecol. 2006 Mar;194(3):598-9.

Editorial comment: George Gilson

Our Indian Health facilities need to be able to maintain a certain level of deliveries to maintain staff competence. In addition to honoring patient autonomy, offering epidural analgesia, when appropriate, is one way to improve a facility's appeal to our pregnant patients in a competitive market.

The 2 RCT manuscripts above also allude to the "external validity" or clinical applicability in practice. The evaluation of clinical application is important, especially in our small rural Indian Health facilities that are struggling with declining deliveries. You may also find this article from Contemporary OB/GYN, Mar 1, 2006 helpful

Is clinical research overrated?

For all the talk about the importance of rigorous medical research and randomized double-blind trials, many physicians still put more faith in clinical experience than clinical experiment. Is it possible to strike a reasonable balance between the two?

Cerrato PL, Lockwood CJ Is clinical research overrated? Contemporary OB/GYN, Mar 1, 2006

Primary Care Discussion Forum

Adverse Childhood Events: Impact on chronic adult illness/Risk taking

May 1, 2006

Moderator: Andrew Hsi, M.D, University of New Mexico

Have you ever wondered where some untoward adult behaviors and chronic illness(s) come from?
Perhaps they have roots in childhood?

We are lucky to have Andrew Hsi M.D., University of New Mexico, moderate a discussion on:

- Parental obesity and inactivity: Impact on childhood obesity
- Past sexual abuse: Effect on adult obesity
- Many other examples will be discussed

We will also be joined by the Indian Health Special Interest Group, AAP for this discussion

Medical Mystery Tour—What is the common theme?

Patient #1

This 35 year old G 2 P1001 was originally scheduled for elective repeat cesarean delivery at 36 2/7 pending results of fetal lung maturity studies. The patient's prenatal course was significant for a first visit at 8 weeks. The gestational age was confirmed by a 10 week ultrasound. The patient was offered a quad screen and /or amniocentesis and declined both. The patient had gastroesophageal reflux disease and received omeprazole 20 mg per day orally.

The patient's previous delivery was significant for a low transverse cesarean delivery for an abruption placenta at term. She otherwise had a history of mild endometriosis and laparoscopy for an ovarian cystectomy.

Patient #2

This 20 year old G 3 P 0020 at 40 2/7 presented with good early dating for an outpatient cervical ripening regimen. The patient had uncomplicated Class A1 gestational diabetes mellitus. The patient weighed 193 lbs with a fetus in a cephalic presentation. Her cervical exam was 50% effaced, 1 cm dilation at the external os, firm, and posterior with the presenting part at -3 station.

What do these two patients have in common?

Stay tuned—next month…the rest of the story.

Shelley Thorkelson, Shiprock

Gestational Diabetes Mellitus Tracking Sheet

Diabetes and Pregnancy Program Flowsheet, Northern Navajo Medical Center at: www.ihs.gov/MedicalPrograms/MCH/M/documents/GDMtrackingsheete.doc

Program Review and Case Management—Diabetes in Pregnancy

Processes of tracking case files using hard copy as well as RPMS and CMS computer systems www.ihs.gov/MedicalPrograms/MCH/M/documents/gdmcasemanagement(3).ppt

Domestic Violence

Native women, violence, substance abuse and HIV risk

Violence has become a critical public health issue in the United States. It has had a particularly devastating impact on the health and well being of Native American women and children. The relationship between aggression and substance use is an intrinsic one: Native women often bear the brunt of violence in drinking situations, which places them and their children at extremely high risk for physical and sexual abuse. In urban environments, many Native American women find themselves in adult relationships that mirror the abuse they experienced and witnessed as children or adolescents. Not only does violence often occur while substances are being used, but conversely, substance use is a frequent consequence of sexual abuse. Clearly, the mental health repercussions of physical or sexual abuse are often severe. Trauma is associated not only with psychological distress, but also with risky behavior and social role impairment. Traumatized women engaging in substance abuse and unsafe sex are at high risk for contracting HIV/AIDS. This article explores the intersection of substance abuse, sexual and physical abuse, and increased HIV risk among urban Native American women in the San Francisco Bay Area.

Saylors K, Daliparthy N. Native women, violence, substance abuse and HIV risk. J Psychoactive Drugs. 2005 Sep;37(3):273-80.

Oklahoma Perspective —Greggory Woitte, Hastings Indian Medical Center

Peripartum Cardiomyopathy

Peripartum cardiomyopathy develops in the last month of pregnancy or in the 5 months post delivery with no identifiable cause for heart failure in the absence of heart disease. It is the fifth leading cause of maternal mortality and may be fatal 20-50% of patients. Diagnosis may be difficult as many of the presenting symptoms are common complaints in pregnant women. However, prompt intervention when peripartum cardimyopathy is suspected by consultation of medicine and anesthesia, along with treatment aimed at heart failure can be potentially life saving.

Murali S, Baldisseri MR. Peripartum cardiomyopathy. Crit Care Med. 2005 Oct;33(10 Suppl):S340-6.

Tidswell M. Peripartum cardiomyopathy. Crit Care Clin. 2004 Oct;20(4):777-88, xi.

Midwives Corner

Jenny Glifort, Anchorage

Liability in triage: management of EMTALA regulations and common obstetric risks

To clear up any misconceptions, I am following up on this topic from the December and February CCC Corners. The following information is paraphrased from Angelini DJ, Mahlmeister LR. Liability in triage: management of EMTALA regulations and common obstetric risks. J Midwifery Womens Health. 2005 Nov-Dec;50(6):472-8. The following is not necessarily the opinion of the Indian Health system or other agencies, unless otherwise stated.

Two key points:

According to Angelini in the EMTALA setting a physician has to certify that a patient is in 'false labor'. With careful consultation a 'qualified medical person' can sign that certification after consulting with a physician who authorizes the patient's care. The physician must countersign the certification as contemporaneously as possible, e. g., 24 hours, under certain conditions. (see below)

…it is the hospital that designates who is a 'qualified medical person'….

Further, it is the hospital that designates who is a 'qualified medical person' to provide appropriate medical screening. The 'qualified medical person' can be a non-physician, e.g., CNM, or RN, etc… If properly applied, then a system of cooperation between the nurses, CNMs, and physicians can easily be devised and be within compliance with the EMTALA directives.

Adequate documentation is the key to success. Each facility should review the Resources below. The L/D or Triage team should come to agreement, and then implement a cohesive plan. In the meantime, the ACNM is working on changing the Federal regulations to allow CNMs to be able to directly diagnose 'false labor' in EMTALA settings.

The ACNM is actively pursuing a revision of the above regulations. The Technical Advisory Committee met on June 15-17, 2005. The Minutes reflect the ACNM proposed changes. The complete minutes can be found below or contact Deanne Williams, Exec. Director, ACNM

http://new.cms.hhs.gov/FACA/07_emtalatag.asp

CCC Editorial

The regulations make no specific provision for how or whether the physician may certify false labor by telephone based on information received from the qualified medical personnel by telephone. Hence, you should consult your administrative staff, plus all stakeholders at your facility and then develop thorough guidelines to support your local process…and then live by those guidelines, e.g., document, document, document.

Resources

G. Freeman, Final EMTALA rule lessens risk, yet getting docs on-call still a problem, Healthcare Risk Manage 25 (2004), pp. 109–113.

D. Glass, J. Rebstock and E. Handberg, Emergency treatment and labor act (EMTALA). Avoiding the pitfalls, J Perinat Neonatal Nurs 18 (2004), pp. 103–114

Emergency Medical Treatment and Labor Act. Definitions: Emergency medical condition. 42 C.F.R. § 489.24 (b) (1). Available from: http://www.emtala.com/law/index.html

Department of Health and Human Services Centers for Medicare and Medicaid Services C42 CFR Parts 413, 482, and 489, Clarifying policies related to the responsibilities of medicare participating hospitals treating individuals with emergency medical conditions: Final rule. Part II. Federal Register Vol 68 (2003) September 9, No 174.

Emergency Medical Treatment and Labor Act. Examinations and treatment for emergency medical conditions and women in labor. 42 U.S.C. § 1395dd (1).

CENTERS FOR MEDICARE & MEDICAID SERVICES website http://new.cms.hhs.gov/

All-fours maneuver effective for reducing shoulder dystocia during labor

OBJECTIVE: To report on a large amount of clinical experience with shoulder dystocia managed primarily with the all-fours maneuver. STUDY DESIGN: The all-fours maneuver consists of moving the laboring patient to her hands and knees. Eighty-two consecutive cases of shoulder dystocia managed with this technique were reported to a registry through January 1996. RESULTS: The incidence of shoulder dystocia was 1.8%, and half of the newborns weighed > or = 4,000 g. Sixty-eight women (83%) delivered without the need for any additional maneuvers. The mean diagnosis-to-delivery interval was 2.3 +/- 1.0 (SD) minutes (range, 1-6). No maternal or perinatal mortality occurred. Morbidity was noted in only four deliveries: a single case of postpartum hemorrhage that did not require transfusion (maternal morbidity, 1.2%), one infant with a fractured humerus and three with low Apgar scores (neonatal morbidity, 4.9%). All morbidity occurred in cases with a birth weight > 4,500 g (P = .0009). CONCLUSION: The all-fours maneuver appears to be a rapid, safe and effective technique for reducing shoulder dystocia in laboring women.

Bruner JP, Drummond SB, Meenan AL, Gaskin IM. All-fours maneuver for reducing shoulder dystocia during labor. J Reprod Med. 1998 May;43(5):439-43.

Navajo News

Kathleen Harner, Tuba City

Methamphetamine abuse among women on Navajo

This begins a four part series on the recognition and treatment of pregnant methamphetamine abusers.

PART I (of 4)

HEADLINE: March 28, 2006, The Navajo Nation "Navajo Nation Police arrest three meth dealers in Dilkon, Family of three includes 81-year-old grandmother, mother, daughter."

Unfortunately, this is not an aberration on Navajo or anywhere else in the country for that matter. Methamphetamine (MA) abuse is a real and growing problem. According to the U.S. Department of Health and Human Services' Results from the 2002 National Survey on Drug Use and Health: National Findings, more than 12 million people age 12 and older (5.3%) reported that they had used MA at least once in their lifetime. Of those surveyed, 597,000 persons age 12 and older (0.3%) reported past month use of MA. Statistics for Navajo are difficult to come by, but Tuba City, a town of 10,000 saw 14 meth related deaths in 2002. A local health department study found that 12% of Tuba City's teens were using meth as were 17% of the residents between the ages of 27 to 45 years. One third of patients screened in the emergency room are positive for the drug. The Tuba City Regional Health Care Corporation (TCRHCC) obstetrical service had its first maternal death in eight years last April and it was directly attributable to MA use.

Late entry to prenatal care or missed prenatal visits is often an indication that a pregnant woman may be abusing drugs….

MA is a potent sympathomimetic agent that causes a massive release of dopamine in the brain, thereby inducing euphoria, increased alertness and a sense of confidence in users. It can be injected, smoked or ingested orally or anally. The timing and intensity of the "rush" is related to the method of administration. MA is readily available and relatively inexpensive. A 250 mg. Packet can supply 3 – 4 users for 24 hours and costs only $25.00. This is about 75% less than cocaine users spend for their drug of choice. Negative effects of the drug include stroke, cardiac arrhthmia, stomach cramps, shaking, increased anxiety, aggression, paranoia, hallucinations and death. Prolonged use results in tolerance. Abusers are more likely than others to engage in risky behaviors such as sharing needles or unsafe sexual practices.

The toxic effects of dopamine and catecholamine release caused by MA have potentially serious effects on the pregnant woman and her fetus. For the mother these may include severe hypertension, hypertensive crisis, cerebrovascular accident, intracranial hemorrhage, cardiac arrhythmia, pulmonary edema, agitation, confusion, seizure, hyperpyrexia and cardiovascular collapse. Effects of long-term use may include anorexia, weight loss, aggressive behavior, psychosis and cerebral arteritis. Fetal effects are more problematic. Animal studies suggest there may be a teratogenic effect but that is not yet established in humans. Mothers who abuse meth have significantly smaller infants than women who are drug free. MA abuse in pregnancy has been associated with increased rates of premature birth, fetal distress and placental abruption. Perinatal exposure can lead to developmental disorders in neonates. Children of MA abusers are at high risk for neglect and abuse.

Late entry to prenatal care or missed prenatal visits is often an indication that a pregnant woman may be abusing drugs or alcohol. Cigarette smoking and a current or past history of other drug abuse might indicate MA abuse. Unfortunately, most pregnant women abusing MA never seek prenatal care and are often seen for the first time in the hospital in labor or experiencing side effects of the drug. The chronic MA abuser exhibits marked physical changes which include weight loss, poor dentition and signs of aging, however these changes appear late in the course of addiction. Abusers are tirelessly hyperactive and stay awake for long periods of time. They often have abrupt personality changes including argumentative and disrespectful behavior (unusual in the Navajo population), incessant talking and newfound self-assertiveness. Borrowing or stealing money or the sudden onset of lying is often a clue to drug use. Drug paraphernalia such as high temperature butane lighters, glass pipes and empty drug packets may alert family members to MA abuse.

Next Month: Identifying MA abusers and suggestions for the treatment of the abusing Gravida

Multiple references available online

OB/GYN CCC Editorial

I want to personally thank Kathleen Harner from Tuba City this excellent 4 part series, of which this is this first installment.

Kathleen Harner, an Ob/Gyn at Tuba City, wrote her Master's thesis on creating a Methamphetamine clinic for pregnant women in Tuba City, 'Methamphetamine Abuse among Pregnant women in Tuba City: A Multi-dimensional, Culturally Sensitive Approach to Prevention, Identification and Treatment'. The planned fourth installment of the series will be on dealing with the methamphetamine abuser who presents to L&D with no prenatal care.

Steve Holve, Tuba City, hosted an excellent discussion forum on this topic through our own Indian Health Primary Care Discussion Forum. That Forum generated considerable discussion, plus a complete set of resources which are posted at the url below.

www.ihs.gov/MedicalPrograms/MCH/F/PCdiscForumMod.cfm#meth

(Protein to Creatinine Ratio…, continued from page 1)

creatinine (P:C) ratio and triaging the patient based on that estimate. As Price et al note above, the P:C ratio on a random urine specimen provides evidence to "rule out" the presence of significant proteinuria as defined by a 24-h urine excretion measurement.

In this clinical situation the International community and the data has preceded the U.S. national benchmark organizations. In 2001 the International Society for the Study of Hypertension in Pregnancy Statement on the classification and diagnosis of the hypertensive disorders of pregnancy recommended either a P:C of > 30 mg/mmol (calculates to 0.26 mg/mg creatinine), or a 24 hour urine value of 300 mg/ day for the baseline diagnosis of pre-eclampsia.

In 2005 the pre-eclampsia community guideline (PRECOG), following the National Institute for Clinical Excellence's recommendations for the development of guidelines, issued similar recommendations about a P:C of > 30 mg/mmol (calculates to 0.26 mg/mg creatinine). PRECOG is supported by the Royal College of Obstetricians and Gynaecologists, the Royal College of Midwives, and the Royal College of General Practitioners.

On the other hand, neither the National Kidney Foundation, nor the American College of Obstetricians and Gynecologists recommends the use of the P:C in pregnancy. Perhaps after these two U.S. groups re-examine the data, including the Price et al systematic review, and the international acceptance of P:C, then the U.S. recommendations may change.

Another disadvantage is that there is not complete agreement in the nephrology community on how to convert the P:C ratio to a similar 24 hour urine protein result. The prevailing view is that the P:C roughly correlates on a one for one basis with a 24 hour specimen, e. g., a P:C of 3.5 roughly correlates to a 24 hour urine protein of 3.5 grams. On the other hand, other nephrologists feel the ratio on a random urine specimen correlates closely with daily protein excretion in g/1.73 m2 of body surface area, when used in mild to moderate pre-eclampsia.

In addition, while a P:C of 0.2 appears to be the most commonly used cut-off there is disagreement among the various authors about their cut-offs. The various cut-offs create a gray zone in the P:C range of 0.2 - 0.3 for a possible screening cut-off.

On balance as the urine P:C appears to be a unit-less measure (mg/dl divided by mg/dl causes the units to cancel out) usually expressed as mg of protein per mg of creatinine. Hence if one knows the total amount of creatinine that a pregnant woman excretes per day, then one can estimate the 24 hour urine protein excretion. The minimum diagnosis of pre-eclampsia, based on proteinuria, can be made at a P:C of 0.2 and further conversions can be made on a 1:1 basis, e. g., a P:C of 5.0 correlates to a 24 hour protein of 5.0 grams.

As one should not base their entire management of pre-eclampsia on the degree of proteinuria, the P:C ratio result may at least provide help in triaging the patient to the proper level of care. Once at the proper care level, a 24 hour protein can be completed if necessary. The decision to intervene in severe pre-eclampsia should be made based on the whole clinical presentation, not on the degree of proteinuria alone. Another scenario involves the triage of a chronic hypertensive patient who can perhaps be monitored as an outpatient versus inpatient.

…the spot urine P:C has supplanted most of the 24 hour urine estimations done in both pediatric and adult nephrologists' clinical practice.

A 24 hour protein may still be indicated in some cases of severe pre-eclampsia, if time permits, as both the present and future pregnancies may be affected. Future pregnancies would be impacted as we currently recommend the use of daily aspirin therapy in patients with previous severe pre-eclampsia. **Efficacy** trials in refined populations in highly controlled studies in referral centers often do not translate well into **effective** practice in the field where most of our clinicians practice. Hence there is a need for practice based research networks in community settings.

In summary, the use of the spot urine P:C has supplanted most of the 24 hour urine estimations done in both pediatric and adult nephrologist's clinical practice. Yet, the practice is not endorsed for use in pregnancy by the National Kidney Foundation, ACOG, or any U.S. national benchmark organization. This mismatch of U.S. benchmarks and clinical recommendations leads to confusion in the clinical care of U.S. pregnant women.

The P:C offers significant advantages to pregnant Indian Health patients and should be explored for use at your facility. Considering the long track record of successful use of the P:C in adults with chronic renal disease, the endorsement the several major international professional organizations, plus the Price et al systematic review, the time may have come for our clinical practice to precede the U.S. national benchmarks.

After discussion among your medical staff, plus local maternal fetal medicine and nephrology consultants, the P:C may offer significant advantages in the triage of AI/AN women with hypertensive disorders of pregnancy.

Resources

Frequently Asked Question: MCH web page
Can we use a protein to creatinine ratio instead of a 24 urine protein in pre-eclampsia?
www.ihs.gov/MedicalPrograms/MCH/M/documents/PCratio4306.doc
(with an exhaustive set of Resources)

Milne F, et al The pre-eclampsia community guideline (PRECOG): how to screen for and detect onset of pre-eclampsia in the community. BMJ. 2005 Mar 12;330(7491):576-80.

Brown M et al. The classification and diagnosis of the hypertensive disorders of pregnancy: Statement from the International Society for the Study of Hypertension in Pregnancy. Hypertens Pregnancy 2001:20(1)ix – xiv

SAVE THE DATES

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

Native Peoples of North America HIV/AIDS Conference

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

I.H.S./A.C.O.G. Obstetric, Neonatal, and Gynecologic Care Course

- September 17–21, 2006
- Denver, Colorado
- Contact **YMalloy@acog.org** or call Yvonne Malloy at 202-863-2580
- Neonatal Resuscitation Program available
- Brochure at:
  www.ihs.gov/MedicalPrograms/MCH/F/documents/ACOG_06brochR1_1.pdf

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Some of the Articles Inside — CCC Corner — April 2006

Abstract of the Month

- Protein to Creatinine Ratio in Pre-eclampsia: Is the data preceding the U.S. benchmarks?

IHS Child Health Notes

- Redeeming Hollow Promises: Case for Mandatory Spending on Health Care for American Indians and Alaska Natives.
- Endemic iron deficiency associated with Helicobacter pylori infection among school-aged children in Alaska.

From your Colleagues

- Chuck North, Albuquerque—RCTs: do they have external validity for patients with multiple co-morbidities
- Alan Waxman, Albuquerque—FDA Approves New Imaging System to Help Detect Cervical Pre-Cancer

Hot Topics

- Obstetrics—Glyburide is at least as effective as insulin therapy in treating gestational diabetes
- Child Health—Mortality Reviews in the Aberdeen Area: Strategies and Outcomes
- Chronic Disease and Illness—Breast cancer study from PIMC

Features

- Featured Website—The MCH Frequently Asked Question (FAQ) site
- STD Corner—New CDC Fact Sheet on HPV in Men
- ACOG—Less Invasive Management of Cervical Cytology Abnormalities in Adolescents
- American Family Physician—Sequential Testing Best Detects Down Syndrome
- Perinatology Picks—No increase risk in neurodevelopment at 2 years of age: Vaginal breech < 3, 500 g
- Primary Care Discussion Forum—Adverse Childhood Events: Impact on chronic adult illness/Risk taking
- Oklahoma Perspective —Peripartum Cardiomyopathy
- Midwives Corner—Liability in triage: management of EMTALA, regulations and common obstetric risks
- Navajo News—Methamphetamine abuse among women on Navajo