



# Perinatal Gazette

Newsletter of the Regional Perinatal Center  
Westchester Medical Center



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## Regional Perinatal Forum

On September 25<sup>th</sup>, we held our second Regional Perinatal Forum entitled "Charting the Course for Perinatal Health in the Hudson Valley Region". There were 82 attendees, including nurses, nurse educators, perinatal fellows, pediatrics and obstetrics residents, physicians, medical students, social workers, lactation consultants, administration, pharmacists, nurse practitioners, and representatives from several regional organizations (March of Dimes, Early Intervention, Planned Parenthood, Dutchess, Orange, Putnam, Sullivan, Rockland, Westchester and Ulster County Departments of Health).

We discussed perinatal health in the region from the caregiver's and the public health perspectives. We have identified access to prenatal care as an important issue in our region. In addition, lactation was also underlined as a crucial focus, often neglected especially in the intensive care setting (see submission from Stephanie Sosnowski elsewhere in this issue). After determining certain regional areas of need as well as regional data to illustrate the issues, focus groups were formed to allow the many different perspectives of the attendees to be voiced in a smaller arena. The groups brought up many different barriers to care such as language and travel as well as regional concerns such as how to insure appropriate numbers of vaginal versus cesarean deliveries occurs.

Regardless of the perspective, it is clear that available perinatal data will be crucial in helping to focus our united efforts. One major source of perinatal data the Statewide Perinatal Database (SPDS). Data from SPDS was presented in examining regional medical outcomes and introducing best practice themes of management of hypoglycemia and delivery room code teams. Finally we heard from Dr. Decastro and Mendoza, representatives from two quadrants, which have held Regional Quality Assurance meetings to date.

This forum is an exciting beginning to a regional partnership of many different perspectives toward the goal of improving regional perinatal health.

**Heather Brumberg, MD, MPH**  
**Director, Perinatal Database Management**  
**Westchester Medical Center**

## In Memory of Dr. Uma Verma



Dr. Uma Verma received her doctorate of medicine from the University of Bombay in India in 1970. Dr. Verma completed her residency training at Methodist Hospital in 1977 and Maternal-Fetal Medicine fellowship at Nassau County Medical Center in 1980. She served as an attending physician and Assistant Professor from 1983 to 1988 at the State University of New York at Stony Brook. She joined the Department of Obstetrics and Gynecology as a specialist in Maternal-Fetal Medicine at Westchester Medical Center & New York Medical College in 1989 as an Associate Professor. In 2000, Dr. Verma was promoted to a full Professor and became the Fellowship Program Director. Dr. Verma was a great physician, scientist, teacher, mentor, and researcher. She much enjoyed teaching and working with the residents, medical students and fellows – it was her true passion.

Throughout her medical career she researched and published over 46 publications and 74 abstracts. Her research interest was the relationship between intra-amniotic infection and fetal asphyxia.

Dr. Verma was a generous and dedicated woman, who was beloved by all who knew her, she will be deeply missed.

**All are welcome to attend a Mass that will be held in her honor on October 30, 2003 at 12:10 pm in the Munger Chapel (1<sup>st</sup> floor, Munger Pavilion). Condolences can be sent to the Family of Dr. Verma/Dr. Thakkar, 22 Prospect Park, Brooklyn, NY 11215.**

## Contemporary Management of Preeclampsia

Preeclampsia is pregnancy-specific syndrome that usually occurs after 20 weeks of gestation. Preeclampsia complicates 68% of pregnancies and is the second most common cause of maternal death in US (after thromboembolic disease), constituting 15% of maternal death. Pathophysiology of this disease is not clearly known. However the end result is widespread vasospasm and endothelial injury causing swollen and leaky capillaries. Preeclampsia is defined by new onset hypertension and proteinuria that may be associated with other sign and symptoms. Mild preeclampsia is diagnosed for BP of 140/90 or higher, proteinuria of > 0.3 g/ 24-hour urine. Women should be considered as having severe preeclampsia if they have BP  $\geq$  160/110 on 2 occasions 6 hours apart, proteinuria of > 5 g/ 24-hour urine, oliguria of < 500 ml in 24 hours, cerebral or visual disturbances, pulmonary edema or cyanosis, epigastric or right upper quadrant pain, elevated liver enzymes, thrombocytopenia, or fetal growth restriction. Delivery is always treatment of choice for the mother with preeclampsia but not necessarily the best choice for premature fetus. Studies in the last few years support expectant management of **mild preeclampsia** until 37-38 weeks gestation as long as the patient is stable with no sign of disease progress and fetal evaluation is consistent with reasonable fetal growth and normal antenatal testing.

In patient with **severe preeclampsia** occurring in pregnancies < 33 weeks, expectant management in tertiary care centers has shown significant prolongation of pregnancy and reduction in total neonatal complications. Supported by randomized controlled studies in severe preeclampsia remote from term, many physicians delay the delivery for not only 48 hours of steroid therapy recommended to promote fetal lung maturity, but as long as the patient does not show signs of severe disease progression. Delivery should be initiated regardless of gestational age in patients with poorly controlled severe hypertension, thrombocytopenia < 100,000, elevated liver function tests with epigastric or right upper quadrant pain, pulmonary edema, rise in serum creatinine by 1 mg/dl over baseline, placental abruption, or persistent severe headache or visual changes. Fetal indications for delivery include nonreassuring fetal testing, severe oligohydramnios, or severe fetal growth restriction (less than 5<sup>th</sup> percentile). Vaginal delivery is preferable if possible in preeclamptic patients.

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### Prematurity Awareness Day

November 18<sup>th</sup>

Just click on the site [marchofdimes.com](http://marchofdimes.com) to save babies and donate \$1 for lifesaving research

## Breastfeeding As A Public Health Initiative

In the interest of public health, increasing the number of babies who breastfeed is of utmost importance. Research continues to confirm what breastfeeding supporters have always known – that there is no equivalent substitute for human milk, and that human milk is best for human babies. Public health benefits for children include reduction in incidence of respiratory infections, ear infections, pneumonia, and diarrhea and urinary tract infections. Benefits to mothers include a reduced risk of ovarian and premenopausal breast cancer, heart disease and osteoporosis. Breastfeeding saves healthcare dollars, too. A study reported in the April 1999 issue of *Pediatrics* set out to determine the excess costs of health care services (office visits, hospitalizations and prescriptions) for three common childhood illnesses (otitis media, gastrointestinal illness and lower respiratory illness) in formula-fed infants compared with infants exclusively breastfed for at least three months. They reported that in the first year of life, there were 2,033 excess office visits, 212 excess days of hospitalization, and 609 excess prescriptions for these three illnesses per 1,000 never breastfed babies. These additional services cost an extra \$331 - \$475 per never breastfed baby during the first year of life.

Increasing breastfeeding is a national public health goal. The Healthy People 2010 goals for breastfeeding state that:

- 75% of all women will breastfeed in the postpartum period
- 50% of all women will still be breastfeeding at six months postpartum
- 25% of all women will still be breastfeeding at one year

We are not there yet, although the most recent data collected by the New York State Department of Health shows that the Mid-Hudson area, which includes several hospitals that are affiliated with the Regional Perinatal Forum, has the highest breastfeeding at discharge rate – 75.8%. This number, however, gives a false sense of success, as it includes both the mothers who are totally breastfeeding (46.7%) and the mothers who are partially breastfeeding (29.1%).

The increase in breastfeeding rates over the past months at Westchester Medical Center demonstrates that hospitals can make effective changes in practice. Sharing their successes with other regional hospitals' lactation coordinators will help those hospitals to increase their rates, as well. The Mid-Hudson Valley Regional Perinatal Forum's breastfeeding committee will meet quarterly to review new breastfeeding data as the data management committee generates it. We will focus on: Increase the number of mothers choosing to breastfeed while in the hospital. Decreasing the number of babies receiving supplemental formula in the region. And increase the duration of breastfeeding.

**Stephanie Sosnowski, ICCE**  
Chair, Breastfeeding Committee, Mid-Hudson Valley  
Regional Perinatal Forum, MISN

## Vaginal Sonography and Prematurity: Is there an impact?

Ultrasound use in the practice of obstetrics has become commonplace. The importance of this modality in the evaluation of the uterine cervix is evident by many published investigations of its use from various countries around the world. Compared to digital examination, transvaginal sonography is more accurate in detecting cervical change. The sensitivity and specificity of ultrasound evaluation of the cervix is 82-95% and 97% respectively compared to 66 and 72% sensitivity and specificity for digital examination. The provocative aspect of transvaginal sonography in evaluating the cervix is whether or not this modality can help to identify women at risk for preterm birth and thereby allow for early intervention to prevent it.

Preterm birth complicates 10 % of all births in the United States. The etiologies that result in preterm birth are multifactorial. However, prematurity most commonly results from premature rupture of membranes, preterm labor of singleton and multiple gestation pregnancies, and cervical incompetence. Within the ethnic groups in this country there is a clear disparity in the rate of prematurity. In the African American population this rate is as high as 18%. Since the cervix, which is the “door” that must open early to permit a preterm delivery, can early detection and intervention decrease preterm deliveries due to this action?

In a normal population of pregnant women the average cervical length at 22 weeks gestation is 3.5 cm. Many studies have consistently found an increase risk of preterm delivery with cervical shortening less than 2.5 cm in high-risk populations. Examining the cervix with transvaginal ultrasound, therefore allows us to identify mid-trimester premature shortening and funneling, which indicates with good accuracy a risk of premature delivery. The question becomes should we screen all pregnant women for the risk of premature delivery? The answer to that question is no. Studies have demonstrated that routine screen of the cervix in a low risk population is not indicated. As expected in the art of medicine, individualization of care by careful identification of risk factors is more accurate and cost effective.

Risk factors that warrant evaluation of the uterine cervix are shown to be the following:

1. Previous preterm delivery from preterm labor or premature rupture of membranes (PROM). Patient's with delivery less than 32 weeks gestation with history of PROM should be screened by transvaginal ultrasound between 16-20 weeks for cervical funneling or shortening less than 2.0 cm. This finding is considered abnormal in the mid-trimester and leads to various interventions.
2. Previous surgical procedure to the cervix. This may be cervical cone biopsy, or multiple dilatation and curettage procedures. It is not yet clear whether LEEP procedures are associated with premature deliveries, especially with variations in technique. Further investigations are needed.

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### Continued from Sonography

3. This population of patient may also have a history of infertility treatment and manipulations to the cervix. The hormonal milieu may also influence the consistency of the cervix in this patient population.

To summarize, although we have not seen a decrease in the rate of preterm deliveries over the last decade, with increase vigilance of the practitioner to identify high-risk patient's using newer modalities, and intervene we may realize a change in our trends. An aggressive approach to prematurity may impact significantly on this problem however a joint concerted effort is needed.

**Kafui A. Demasio, M.D., M.P.H.**  
**Assistant Professor of Obstetrics and Gynecology**  
**Division of Maternal Fetal Medicine**  
**New York Medical College/ Westchester Medical Center**

Picture below - Dr. C.D. Hsu, Director of OB/GYN and Dr. Kafui Demasio, Obstetrician from WMC, at the September Forum



Picture below - Neonatologist, Dr. Kovacs (Vassar Hospital) and Dr. Chelala (Putnam Hospital) at The Forum



## Designer Babies – Are They Here Yet?

GATTACCA was a science fiction movie set in the future about a society who believed in genetically engineering perfect offspring. The media has coined the phrase “Designer Babies” and talks about “designing babies with the most desirable traits”. Medicine tries not to delve into the world of science fiction. Medicine does deal with preserving life. There are genetic disorders, which are potentially lethal to an individual newborn or child. These disorders can recur in families and can result in premature delivery, cause anguish in families living with a critically ill child or cause a couple to make a painful decision of terminating an otherwise wanted pregnancy. Now we have the technology for Preimplantation Genetic Diagnosis, which enables physicians to identify genetic diseases prior to embryonic attachment to the uterus, and eliminates the need for possible pregnancy termination after prenatal diagnosis of a genetically affected fetus. Couples who are candidates for this procedure include couples that are at risk for single gene Mendelian disorders, couples that experience recurrent miscarriages or premature delivery because one of them carries a balance chromosome rearrangement or couples with increased maternal age. The technique of IVF is used and a single sperm is introduced into a single egg in the Petri dish. After cell division, a single cell is removed from the embryo and tested for the offending disorder. Only unaffected embryos are placed in the uterus for continuation of pregnancy. There is selection only of embryos that are not affected with a life threatening disorder.

This is what our “designer babies” are about and they are here. One of the more controversial issues arises around “designing” a baby who is an exact tissue match to save the life of an affected sibling rather than their own life. This indication has been banned in some countries such as Germany but is permitted in the US. Selection of unaffected embryos is not the same as altering actual genes in an embryo – that would be genetic engineering. What are your thoughts about genetically unaffected “designer babies” selected from Preimplantation Genetic Diagnosis?

**Patricia Parton, M.D.**

**Director of Biochemical Genetics at WMC**

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