

MFM NEWS

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Department of Obstetrics & Gynecology
Division of Maternal-Fetal Medicine

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HAPPY New Year

MFM wishes prosperity for your practice as we enter 2007!

The office will be closed for New Year's Day and will reopen on January 2,



Is There a Genetic Basis for Preterm Labor?

A gene called SERPIN1 has been identified and appears to be associated with preterm labor. The genetic variation apparently reduces the amount of collagen made in the amniotic membranes, which are consequently weaker and more likely to rupture prematurely. PPROM inevitably results in a preterm delivery. A team of investigators from the University of Pennsylvania performed DNA analysis on 323 African-American women and 148 European Americans and found the variant form of the gene is 12.4% and 4.1% respectively. The increased risk of preterm delivery in African-American women has perplexed obstetricians for many years. In addition, these investigators performed DNA analysis on women whose pregnancies were complicated by PPROM and compared them to women who had normal term deliveries and found the incidence of the gene to be 11.5% and 4.05% respectively. Unfortunately, this exciting discovery has no immediate implications for treatments that might improve outcome, and much more research will be necessary before this has true clinical implications.

What About Treatment of BV to Prevent Preterm Delivery?

The association of bacterial vaginosis (BV) and preterm delivery has been known for many years but whether BV is causative is not yet proven. It is also unknown whether treatment will reduce the risk. Treatment of BV remains a controversial topic in our field. In a recent Swedish study, 819 women with BV were randomly selected to receive either a 7 day course of clindamycin vaginal cream or no treatment. The rate of births before 37 weeks did not differ significantly between the groups. However, preterm delivery prior to 33 weeks was much less common in women receiving clindamycin. In addition, preterm infants born to mothers in the treated group required an average of 18 days in the NICU compared to 45 days in the untreated group. The team concluded that clindamycin vaginal cream was associated with a significantly prolonged gestation and reduced cost of neonatal care in women with BV. Since the treatment is relatively benign, continued efforts to identify and treat such patients still seems to be a reasonable plan of care.



Increase in Preterm Births in USA

Compared to 1981, there has been a 30% increase in preterm births in the USA so that now 1 in 8 babies are born prior to 37 weeks. The reasons for this are not precisely known. It is estimated that the USA spends at least \$26 billion a year in care for these infants due to cerebral palsy, mental retardation and hearing and vision problems.

More Evidence for the “34 Week Rule”

A recent report in the Archives of Disease in Childhood, Fetal and Neonatal Edition from July 2006 highlights that infants born prematurely at 30-34 weeks gestation experience significant morbidity in the early months of life. This study looked at birth outcomes and 3 months of follow up in 850 infants who survived the birth-stay at the hospital.

Approximately 50% required ventilatory assistance and 25% received artificial surfactant. Just over 11% required re-admission, which is higher than the 4.3% readmission rate for term infants. In a subgroup of 30-32 weeks, there was a higher risk of sepsis or meningitis (4.9%), necrotizing enterocolitis (1.2%) and intraventricular hemorrhage (0.6%) compared to term infants. Although we tend to be very positive about the neonatal outcome after 30 weeks, there still seems to be some advantage in terms of short-term morbidity to prolonging pregnancies to greater than 34 weeks whenever possible.

If you have any questions or suggestions regarding the MFM Newsletter, please contact the editor Sue K. Sayegh, M.D. at sayeghsk@evms.edu



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