

MFM NEWS

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Department of Obstetrics & Gynecology
Division of Maternal-Fetal Medicine

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Mark Your Calendars... The 11th Annual Mid-Atlantic Ultrasound Symposium in Obstetrics & Gynecology will be held at The Hilton Virginia Beach Oceanfront on November 14-15, 2008. This year's presenters will be Dr. Alfred Abuhamad, Dr. Silvina Bocca, Dr. Joshua Copel, Dr. Steven Goldstein, Dr. Andrew Helfgott, Dr. Sue Sayegh, and Dr. Steven Warsof. We look forward to seeing you at this CME accredited symposium!

GESTATIONAL DIABETES (GDM) – Insulin or Oral agents for management ?

Diet therapy and self blood glucose monitoring are the mainstay for therapy of glucose intolerance in pregnancy. Although most will succeed with diet, a significant proportion (~20-25%) fail and require additional Rx. Insulin remains the gold standard for treatment when a patient with GDM (class A2) fails diet, however, insulin is not risk free and is not welcomed by most. The use of several oral agents (all Class B risk) as an alternative to insulin has rapidly gained acceptance in the U.S. and may soon become standard of care in the management of GDM. Several RCTs have been published supporting the use oral agents as a "safe" alternative to insulin. Reported success rates with oral Rx vary from ~ 50 - 85%. Those who fail oral Rx will require insulin. Patients diagnosed in the first half of pregnancy or who have significantly elevated fasting BS on their OGTT ($\geq 110\text{mg/dl}$) are unlikely to achieve good control with oral Rx; they may have unrecognized pregestational DM and should probably be treated with insulin. All the oral agents tested for GDM Rx have GI side effects and should not be offered to patients with GI or liver disease. Some have potential drug interactions with meds commonly used in OB patients.

Several studies endorse **Glyburide** as a successful (up to 85%), safe, inexpensive alternative to insulin. It is a potent Rx which can lead to significant refractory hypoglycemia particularly in patients not complying with the 6 meal/snack diet. NSAIDs and β -blockers can potentiate its hypoglycemic effect. Ca^{++} blockers, thyroid meds and phenothiazines can decrease its effectiveness. It should be used carefully in patients with sulfa drug allergies. Placental transport is minimal. Some report an increased risk for weight gain, PIH and neonatal hypoglycemia.

Metformin (glucophage) is readily transported across the placenta and there has been concern for potential adverse long term effects on the exposed offspring. A recently published RCT involving > 700 patients (with 5 year follow-up on the babies) actually suggests that *in utero* exposure may have beneficial long term effects for the child. Although Metformin alone has lower (~ 50%) success, it may be an ideal choice for the patient with PCOS (insulin resistant) and may help curb weight gain in pregnancy. It may lower B12 absorption (hand numbness may not be carpal tunnel). It is inexpensive, well tolerated and does not lead to hypoglycemia. It is the Rx of choice for persistent NIDDM post-partum and has been advocated for DM prevention in patients with borderline glucose intolerance. It is probably safe to use in the breastfeeding mom.

Precose™ (acarbose) targets post-prandial hyperglycemia by slowing down carbohydrate absorption from the GI tract. Less than 2% is absorbed systemically; placental transport is not reported. It cannot lower pre-prandial BS but is an ideal safe choice for the patient who is compliant with her diet and has mild to moderate post-prandial hyperglycemia. Dietary compliance is essential for success (~80%) and cost is somewhat higher.

At EVMS, we have been successfully combining carefully selected medications for almost 8 years. Goals for glycemic control in pregnancy: **FBS 60-90, pre-prandial BS ≤ 95 , 1-2 hr post meal $\leq 120\text{mg/dl}$ (805 of the time)**. Baseline LFTs and serial HbA1c's should be checked. Patients on oral Rx should be managed as if they were on insulin.

Margarita de Veciana, M.S., MD

DRUG	Mode of Action	Success Rate	Starting/ Max daily dose	Risks / Benefits
Glyburide	\uparrow insulin secretion	80-85%	2.5mg po bid/ 20mg per day	Hypoglycemia, possible PIH, weight gain, Rx interactions, possible neonatal \downarrow BS
Metformin	\uparrow insulin sensitivity	~50%	500mg po bid/ 2500mg per day	Possible B12 malabsorption/ No hypoglycemia, curbs weight gain
Precose™	α -hyperglycemic, slows CHO absorption	~80%	25mg po tid/ 300mg per day	No risks/ No hypoglycemia

Need More Ultrasound CME Credits for AIUM Accreditation?

A yearly reservation at the Mid Atlantic Ultrasound Symposium offered by our department each year assures you the sufficient amount of CME credits (30 in 3 years) required by the AIUM for accreditation of your practice. However, if you miss a year (or happen to be the one assigned to be on call that weekend) – you can obtain up to another 6 credits per year by attending the Prenatal Diagnosis Conference at EVMS. This is a conference organized by systems (Cardiac, Renal, Genetic, CNS, Surgical) in which cases of prenatally diagnosed fetal anomalies are discussed with the post natal follow up by our colleagues at CHKD. It is regularly scheduled on the first Thursdays of EVEN months from 9-10 am at Hofheimer Hall Auditorium (1 credit per conference). You are more than welcome to attend this interesting conference at no charge. You can't beat the price and location! The dates for the next academic year are August 7, October 2, December 4 (in 2008) and February 5, April 16* and June 4 (in 2009). *April 2 is during the AIUM Annual Meeting.



Genetic Counseling in Virginia Beach

Beginning in September, 2008, genetic counseling will once again be available at the EVMS Tidewater Perinatal Center Virginia Beach office for 2 days each week. Please feel free to refer your patients who need genetic counseling to this location if it is more convenient for them than our other offices. Typical indications for genetic counseling are advanced maternal age, abnormal Down Syndrome Screening, family history of a genetic condition or ultrasound abnormality.

The EVMS Tidewater Perinatal Center will also be offering first trimester screening for Down Syndrome via NT measurement and biochemical analysis for low risk patients (those patients under the age of 35 who do not have a family history of Down Syndrome). Please call 395-8900 to schedule your patients who need genetic counseling or those patients who would like to have first trimester screening for Down Syndrome.



WELCOME TO THE OBGYN DEPARTMENT!

We'd like to send a warm welcome to Dr. Nicole Calloway Rankins, our newest Physician in the OB/GYN Department. Dr. Nicole Calloway Rankins attended Spelman College, Atlanta GA 1992-1996 earning a BS in Mathematics, graduating Summa Cum Laude. Then she attended North Carolina A&T State University, Greensboro NC 1996-1998, earning a BS in Mechanical Engineering. As a WISE (Women in Science and Engineering) Scholar she attended Spelman College and North Carolina A&T State University as part of the Dual Degree Engineering Program on a full academic scholarship. She earned her MD at EVMS, Norfolk, VA attending 1998-2002, Alpha Omega Alpha member. From 2002-2006 she attended Duke University Medical Center, Durham, NC for her Residency in OB/GYN and just finished a Triangle Clinical Research Fellowship at University of North Carolina at Chapel Hill, Chapel Hill, NC. While at EVMS Dr. Rankins was a Research Assistant for Drs. Abuhamad and Dattel. She will be continuing her research interests while she takes on her new role as Assistant Professor at EVMS.

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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