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NJPA
New Jersey Perinatal Associates
Compassionate Care. Clinical Excellence.

# MFM Newsletter

## Medical Management of Gestational Diabetes

In February of 2018, the American Congress of Obstetrics and Gynecology (ACOG), released an updated practice bulletin of gestational diabetes mellitus (GDM). One of the most significant updates in this document pertains to the medical management of gestational diabetes, a condition in which carbohydrate intolerance develops during pregnancy leading to elevated levels of glucose. In 2009, it was estimated that 7% of all pregnancies were complicated by any type of diabetes and that approximately 86% of these cases represented women with GDM.

Women with GDM have a higher risk of developing preeclampsia and undergoing a cesarean delivery. Furthermore, women with GDM have an increased risk of developing diabetes later in life. The offspring of women with GDM are at increased risk of macrosomia, neonatal hypoglycemia, hyperbilirubinemia, shoulder dystocia and birth trauma. There is also an increased risk of stillbirth. Other studies have demonstrated that fetal exposure to maternal diabetes contributes to childhood and adult-onset obesity and diabetes in offspring.

When diet and exercise alone are not able to control a patient's glucose values, medical treatment is recommended to improve glucose control. On the next page of this newsletter, we review the current recommended options for the medical management of GDM.

**In this newsletter…**



# *Insulin versus oral antidiabetic agents*


References

"Gestational Diabetes Mellitus" ACOG Practice Bulletin, Number 190, February 2018

SMFM Statement: Pharmacological treatment of gestational diabetes. SMFM Publications Committee. In Press, 2018


- Historically, insulin has been considered the standard therapy for GDM management and this continues to be reinforced by ACOG and the American Diabetes Association
- Insulin does not cross the placenta and can achieve tight metabolic control.
- Oral antidiabetic agents (eg, metformin and glyburide) increasingly are being used among women with GDM, despite the fact that they have not been approved by the FDA for this indication.
- Trials comparing metformin vs. insulin for GDM management showed similar rates of perinatal morbidity.
- Some studies reveal that between 26 and 46% of women who took metformin alone eventually required insulin.
- The most common adverse effects of metformin are abdominal pain and diarrhea.
- In women who decline insulin therapy, are unable to safely administer insulin, or cannot afford insulin, metformin is a reasonable alternative choice.

**Please note that New Jersey Perinatal Associates (NJPA) has developed these best practice recommendations based on a review of current literature and expert opinion. They are not intended to establish standards or absolute requirements and these recommendations do not guarantee a specific outcome. All recommendations and best practices should be considered in the context of each patient's individual circumstances and clinical evaluation.**

- SMFM's statement differs in some respects from ACOG's statement. SMFM acknowledges that this difference is based on the values placed by different experts and providers on the evidence available in the medical literature.
- SMFM concludes that metformin is a reasonable and safe first-line pharmacologic alternative to insulin, recognizing that up to 50% of women will still require insulin to achieve glucose control.
- Evidence indicates that glyburide treatment should not be recommended as a first-choice pharmacologic treatment because in most studies, it does not yield equivalent outcomes to insulin or metformin.
- Health care providers should counsel women of the limitations in safety data when prescribing oral agents to women with GDM.

# *Genetics Corner*

## Non-invasive prenatal testing for single gene disorders

Visit our website at:

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A new non-invasive prenatal test (NIPT) to screen for single-gene disorders is now clinically available.

This test screens for new mutations in up to 30 genes that have a combined incidence rate of nearly 1 in 600, which is higher than that of Down syndrome. These mutations can cause severe conditions that affect skeletal, cardiac and neurological systems and often go undetected with routine prenatal screening. These conditions include Noonan syndrome, osteogenesis imperfecta, craniosynostosis syndromes, achondroplasia and Rett syndrome, among others.

A clinical scenario where this type of NIPT could be considered is with advanced paternal age. Advanced paternal age has been associated with an increased chance to have offspring with a dominantly inherited disorder due to a spontaneous mutation. The risk is suggested to be 4-5 times greater for fathers of 45 years or older than for fathers of 20-25 years of age.

It is important to keep in mind that this test is a screening test and does not replace invasive testing. A positive screening test requires appropriate diagnostic invasive testing. A negative result reduces, but does not eliminate, the likelihood of these genetic diseases. Furthermore, this testing is not inclusive of all genetic diseases, as no such test exists. Therefore, a negative result does not rule out all genetic conditions.

If you have any questions, please feel free to call any one of our genetic counselors at 973-535-8012.

# Meet our perinatologist…

## Leon G. Smith, Jr., MD

Dr. Smith graduated from Georgetown University School of Medicine in Washington, DC and completed his residency in obstetrics and gynecology at the Tulane University Affiliated Hospitals in New Orleans, Louisiana.

He completed his fellowship training in maternal-fetal medicine at Baylor College of Medicine in Houston, Texas in 1991. Dr. Smith's research interests include obstetrical infections and prenatal diagnosis.

Dr. Smith has been named a Top Doctor by Castle Connolly, New York Magazine, NJ Monthly and Inside Jersey.

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**Offices in: Livingston** (973) 322-5287, **Belleville** (973) 450-2589, **Warren** (908) 769-2577, **Teaneck** (201) 833-3535, **Westfield** (908)233-8640