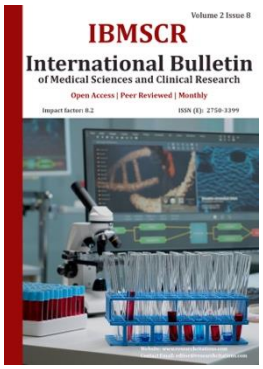

GESTATIONAL DIABETES: CAUSES, SYMPTOMS AND MANAGEMENT

Khasanova Dilafruz Abdukhamidovna
assistant
Department of Obstetrics and gynecology #1
Samarkand State Medical University, Samarkand, Uzbekistan
https://doi.org/10.5281/zenodo.10902928

Annotation. The early management of gestational diabetes is an opportunity to prevent these adverse outcomes. The Australian Carbohydrate Intolerance Study in Pregnant Women (ACHOIS) was influential in providing evidence that treatment of gestational diabetes according to standard care (at that time) reduced the risk of adverse outcomes to that of women without gestational diabetes. The treatment of gestational diabetes has since progressed with changes to criteria and a move towards a more evidence-based approach, including the development of an Australasian clinical practice guideline. Despite this, controversies exist regarding the diagnosis and management of gestational diabetes. An international, multi-centre randomized controlled trial called the Treatment of Booking Gestational Diabetes Mellitus study is currently underway and aims to provide an answer to these controversies.

Key words: gestational diabetes, pregnancy, neonatal morbidity, diagnostical tests, management.

Relevance. Gestational diabetes is defined classically as "carbohydrate intolerance of variable severity with onset or first recognition during pregnancy". This definition, although classifying gestational diabetes as a disease of abnormal carbohydrate metabolism, fails to capture the underlying pathology of the disease. Understandably, this has led to conflicting results with regards to its pathogenesis and the diagnosis of gestational diabetes. Despite these ambiguities, it is widely accepted that the morbidity of gestational diabetes arises from the damaging effects of hyperglycemia.

Gestational diabetes has important adverse effects on pregnancy outcomes and the health of the offspring. An increasing prevalence of gestational diabetes has been reported and is attributed to the obesity epidemic, sedentary lifestyle, and poor diet. The prevalence of gestational diabetes in Australia is reported to be 3-14% and is increasing in line with the prevalence of type 2 diabetes. This is of great concern as gestational diabetes is associated with substantially increased risk of a range of adverse outcomes for the mother and her offspring, both in the short and long term. It is documented to be a risk factor for preeclampsia, caesarean section, and macrosomia. Offspring of pregnancies affected by gestational diabetes are at increased risk of being born large for gestational age, stillbirth, birth trauma, and neonatal morbidity. In the long term, both the mothers and offspring are at increased risk of developing type 2 diabetes and related chronic diseases. The significance of gestational diabetes is reflected by the substantial economic costs.

During the first half of the 21st century, the global prevalence of obesity and its related morbidity has increased at an astronomical rate. In its wake, Type 2 diabetes, a chronic disease strongly associated with obesity, has surged to the forefront as a major health

concern. In the US alone, there are an estimated 18.2 million people currently diagnosed with diabetes and a projected 61 million with pre-diabetes. Of equal concern is the increasing prevalence of gestational diabetes, which closely parallels the increases in obesity and Type 2 diabetes. In turn, the escalation in gestational diabetes further contributes to the vicious cycle of increasing Type 2 diabetes. It is crucial that healthcare providers gain a better understanding of this disease in order to provide more effective prevention and management in the future.

An important step in identifying a disease and evaluating the impact of the diagnosis is to determine its prevalence. Gestational diabetes is the commonest metabolic disorder in pregnancy, with a considerable increase in prevalence over the past 20 years. According to the American Diabetes Association, the prevalence of GDM is as high as 14% of all pregnancies. This is likely to represent an underestimation of the actual prevalence of GDM, given the lack of a global consensus on the diagnostic criteria. A US study revealed a 122% increase in GDM prevalence over a 6-year period. Various factors have contributed to this observed increase. The rising maternal age at pregnancy has several implications on the prevalence of GDM. Advanced maternal age increases the risk of impaired glucose tolerance and type 2 diabetes. This parallels the increased risk of GDM with a background of certain ethnic groups. Black, Hispanic, and Asian women are known to have a higher risk of developing gestational diabetes. This raises the question of whether genetic susceptibility is a contributing factor to the development of GDM. It has been shown that a family history of diabetes and the presence of diabetes in previous pregnancies are strong risk factors for GDM. In addition to the increasing prevalence of GDM, there is also evidence to suggest a true increase in the incidence of GDM. This points towards environmental factors having an influence on the development of gestational diabetes. As the diagnostic criteria for GDM have remained fairly consistent, this pattern of increased incidence is likely to reflect changes in the characteristics of the pregnant population and modern lifestyle factors. Understanding the risk factors for GDM is useful for identifying women who are more likely to develop the condition. This allows for early assessment and implementation of prevention strategies for those at higher risk. An Australian study has shown that simple and inexpensive lifestyle measures, which result in modest weight loss, can reduce the incidence of GDM by 50%. Due to the significant impact of diabetes during pregnancy on both mother and child, prevention methods are an important consideration for global initiatives aimed at reducing the burden of diabetes.

The prevalence of gestational diabetes is increasing along with the epidemic of obesity in the US and the world. Obesity is a strong risk factor for gestational diabetes, and with 50% of women of reproductive age in the US being overweight or obese, rates of gestational diabetes are expected to continue rising. Among US women between the ages of 20-44, racial and ethnic disparities in prevalence are striking: 15% for non-Hispanic white, 27% for Hispanic, and 25% for non-Hispanic black women. This discrepancy cannot be accounted for by genetics alone, and likely reflects differences in socioeconomic status, and access to and quality of medical care. Family history of diabetes, previous gestational diabetes, and maternal age also are significantly associated with gestational diabetes.

Gestational diabetes is a condition that occurs in pregnant women, usually during the second half of pregnancy. In women with gestational diabetes, blood sugar usually returns to normal soon after delivery. However, women who have had gestational diabetes have an increased

risk of developing type 2 diabetes later in life. They are also at higher risk of developing gestational diabetes in future pregnancies, and the condition carries long-term risk for both mother and child.

Conclusion. Gestational diabetes is a type of diabetes that develops, or is first diagnosed, during pregnancy. This type of diabetes affects between three and eight out of one hundred women during pregnancy and increases the risk of developing type two diabetes in the future. Whilst diabetes in pregnancy is not a new issue, it is an important one. Thanks to the HAPO study (Hyperglycemia and Adverse Pregnancy Outcome), we have further insights into the potential risks and the seriousness of even mild gestational diabetes. In this essay, we have chosen three key words relevant to this topic that we feel require further definition in the context of gestational diabetes: effectiveness, intervention, and prenatal (Crowther, 2005).

References:

1.Abdukhamidovna K. D. MANAGEMENT OF PREGNANT WOMEN WITH IDIOPATIC THROMBOCYTOPENIC PURPLE //European International Journal of Multidisciplinary Research and Management Studies. – 2023. – Т. 3. – №. 02. – С. 16-21.
2.Abdukhamidovna K. D. АУТОИММУННЫЙ ТИРЕОИДИТ: БЕРЕМЕННОСТЬ И РОДЫ //JOURNAL OF BIOMEDICINE AND PRACTICE. – 2022. – Т. 7. – №. 5.
3.Abdukhamidovna K. D. A DIFFERENTIATED APPROACH TO THE TREATMENT OF INFERTILITY IN PCOS //American Journal Of Biomedical Science & Pharmaceutical Innovation. – 2023. – Т. 3. – №. 04. – С. 1-6.
4.Abduhamidovna X. D. REVMATOID ARTRITI BO'LGAN HOMILADOR AYOLLARDA ANEMIYA //JOURNAL OF BIOMEDICINE AND PRACTICE. – 2023. – Т. 8. – №. 1.
5.Buchanan T. A. et al. Gestational diabetes mellitus //The Journal of clinical investigation. – 2005. – Т. 115. – №. 3. – С. 485-491.
6.Coustan D. R. Gestational diabetes mellitus //Clinical chemistry. – 2013. – Т. 59. – №. 9. – С. 1310-1321.
7.Dilafruz A. The Practice-oriented approach to learning in europe //Conferencea. – 2023. – С. 79-80.
8.Kjos S. L., Buchanan T. A. Gestational diabetes mellitus //New England journal of medicine. – 1999. – Т. 341. – №. 23. – С. 1749-1756.
9.McIntyre H. D. et al. Gestational diabetes mellitus //Nature reviews Disease primers. – 2019. – Т. 5. – №. 1. – С. 47.
10.Rakhimovna K. D., Abdumuminovna S. Z. The role of staphylococcal infection in the structure of inflammatory diseases. – 2022.
11.Shopulotova Z. A., Zubaydilloeva Z. K. THE VALUE OF ULTRASOUND DIAGNOSTICS IN PREGNANT WOMEN WITH CHRONIC PYELONEPHRITIS //Бюллетень студентов нового Узбекистана. – 2023. – Т. 1. – №. 9. – С. 19-22.
12.Shopulotova Z. A., Zubaydilloeva Z. K. PERINATAL CARDIOLOGY: PREGNANCY AND CONGENITAL HEART DEFECTS //Евразийский журнал академических исследований. – 2023. – Т. 3. – №. 9. – С. 55-59.
13.Shopulotova Z. A., Zubaydilloeva Z. K., Khudoyarova D. R. COMORBID EVENTS IN PREGNANT WOMEN WITH PYELONEPHRITIS AND PREVENTION OF THESE CONDITIONS //Бюллетень педагогов нового Узбекистана. – 2023. – Т. 1. – №. 9. – С. 35-38.

14.Shopulotova Z., Shopulotov S., Kobilova Z. MODERN ASPECTS OF HYPERPLASTIC PRO //Science and innovation. – 2023. – T. 2. – №. D12. – C. 787-791.
15.Shopulotova Z., Kobilova Z., Bazarova F. TREATMENT OF COMPLICATED GESTATIONAL PYELONEPHRITIS IN PREGNANTS //Science and innovation. – 2023. – T. 2. – №. D12. – C. 630-634.
16.Хасанова Д., Камалова Д. Диагностика аутоиммунного тиреоидита у беременных и изучение исходов родов //Журнал биомедицины и практики. – 2021. – Т. 1. – №. 3/2. – С. 14-18.
17.Хасанова Д. НАРУШЕНИЕ МОЧЕИСПУСКАНИЯ У БЕРЕМЕННЫХ //Евразийский журнал медицинских и естественных наук. – 2023. – Т. 3. – №. 10. – С. 90-94.