Streszczenie w języku angielskim

Introduction

Gestational diabetes mellitus (GDM) defined as hyperglycemia first recognized in pregnancy constitutes an increasing clinical problem. GDM criteria dynamically changed within years and has differed between international scientific societies' guidelines. Till 2013 Polish Diabetes Association (PTD) recommendations on GDM based on modified WHO 1999 criteria. GDM was diagnosed when fasting plasma glucose (FPG) was ≥100 mg/dl or when 2-hour glycemia was ≥140 mg/dl following 75g oral glucose tolerance test (OGTT). In 2014 PTD updated GDM criteria in accordance with International Association of the Diabetes and Pregnancy Study Groups (IADPSG). New criteria, used till date, state that GDM should be diagnosed when FPG is ≥92 mg/dl or when following 75g OGTT 1-hour or 2-hour glycemia is ≥180 mg/dl and ≥153 mg/dl respectively.

Aim of the study

The aim of the study was to evaluate the clinical utility of current PTD criteria basing on IADPSG 2010 and to compare it with old diagnostic criteria for GDM (PTD 2013).

Materials and Methods

Pregnant woman treated in Diabetic Outpatient and in the Department of Obstetrics and Gynecology of Wojewodzki Hospital in Kielce between March 2016 and September 2018 were included in the study. Inclusion criteria were GDM diagnosed based on PTD 2013 or IADPSG 2010 criteria or being at high risk of GDM. The study character was observational.

Results

Two hundred twenty-three patients met the inclusion criteria. Among 173 patients diagnosed and treated for GDM, 142 patients (82%) were diagnosed based on PTD 2014 criteria. Remaining 31 (18%) patients were characterized by impaired glycemia in 158

2h 75g OGTT ranging from 140 to 152 mg/dl. Both groups did not differ in the prevalence of GDM risk factors and the frequency of most neonatal and maternal complications. Hypothropic neonates (13% vs 6%) and preterm births (17% vs 6%) were more frequent in group A. Fasting glycemia (p<0,0001 OR=1,08 CI 1,05-1,13), OGTT performance before 24 weeks of gestation (p<0,05 OR=3,1 CI 1,2-7,9) and abnormal body mass (BMI $\geq$25 kg/m²) (p=0,1 OR=1,9 CI 0,9-3,9) were predictive for insulin therapy initiation. Prediction model for prediabetes after pregnancy included fasting glycemia at first visit in pregnancy (p<0,05 OR=1,09 CI 1,015-1,166), first degree relative with diabetes (p<0,05 OR=4,99 CI 1,39-17,82), rapid abnormal weight gain (p<0,1 OR=3,37 CI 0,95-11,99) and glycated hemoglobin level (p<0,01 OR=12,0 CI 2,4- 61,5).

Conclusion

Pregnant patients recognized as healthy according to new criteria, who would have been diagnosed with GDM according to old criteria (before 2014) constitute a significant proportion of GDM patients. Therefore, current GDM criteria might still require improvement.

Using predictive models based on clinical data and glycemic profile, the probability of insulin therapy initiation and prediabetes after pregnancy could be determined, which might facilitate stratification of GDM patients and treatment intensification planning