

Gestational Diabetes Mellitus: comparision of pregnant women diagnosis by first visit fasting blood glucose and by 75g oral glucose tolerance test



Authors: Souza, ACRLA, Paganoti, CF, Rodrigues, AS, Costa, RA, Francisco, RPV Departamento de Obstetrícia e Ginecologia Hospital das Clínicas - Faculdade de Medicina da Universidade de São Paulo

Introduction: Many questions about the validity of the proposition of the International Association of Diabetes and Pregnancy Study Group (IADPSG) consensus regarding diagnosis of GDM had being made particularly about those women diagnosed by abnormal fasting blood glucose (FBG) at the first antenatal visit. To evaluate clinical and laboratorial profile of women diagnosed for GDM by the FBG and those diagnosed for GDM by 75g oral glucose tolerance test (GTT).

Objective: To evaluate clinical and laboratorial profile of women diagnosed for GDM by the FBG and those diagnosed for GDM by 75g oral glucose tolerance test (GTT).

Materials and Methods: Observational, retrospective cohort study by accessing clinical and laboratorial data from electronic medical chart of pregnant women that attended antenatal care in a tertiary teaching hospital in Sao Paulo city (Brazil) from January 2012 to December 2015 with GDM diagnosed by FBG before 24 gestational weeks or by GTT after 24 gestational weeks according to IADPSG criteria. Primary outcome was the requirement of insulin therapy to achieve blood glucose targets comparing the groups FBG and GTT

Results: 408 pregnant women were diagnosed for GDM by FBG and 454 by GTT. Among them, 135 (33%) needed insulin therapy in FBG group and 109 (24%) used insulin in GTT group (p 0.003). FBG group more frequently had prior GDM (p=0.005) and family history of diabetes (p=0.007) and GTT group were primigravida more often (p=0.012).

Figure 2. Factors associated with the need for insulin therapy in patientes with GDM according to diagnostic test. São Paulo, 2012 -2015, n= 862)



Figure 1. Insulin need for GDM treatment according to the diagnostic test. São Paulo, 2012 - 2015, n= 862



Table 1. Clinical and sociodemographic data of pregnant women with gestational diabetes according to diagnostic method (São Paulo, 2012-2015) ¹Student's t test; ²Chisquare test; FBG: fasting blood glucose test; GTT: oral glucose tolerance test

	FBG	GTT	P-value
	(n=408)	(n=454)	
Maternal age (years), mean ± SD	32.7± 6.1	32.4± 6.1	0.530 ¹
Primigravida, n(%)	98 (24.0)	144 (31.7)	0.012 ²
Prepregnancy BMI (kg/m²), mean ± SD)	30.6± 6.8	28.3±5.6	0.964 ¹
Educational level			0.569 ²
Elementary school, n (%)	101 (25.5)	105 (23.4)	
High school, n (%)	212 (53.5)	250 (55.8)	
Higher education, n (%)	83 (21)	93 (20.8)	
Family history of diabetes, n (%)	257 (63.1)	240 (54.1)	0.007 ²
Prior GDM, n (%)	49 (12.0)	29 (6.5)	0.005 ²
Prior fetal macrosomia, n (%)	35 (8.6)	36 (8.2)	0.744 ²
Choronic Arterial hipertension, n (%)	113 (27.7)	108 (24.0)	0.217 ²
Treatment with insulin, n (%)	135 (33.1)	109 (24.0)	0.003 ²

Conclusions: Pregnant women with GDM diagnosed by abnormal FBG needed insulin to glycemic control more often than those diagnosed by abnormal GTT besides that had prior GDM and family history of diabetes more frequently.