The glycaemic levels from 75-g oral glucose tolerant test as predictors for macrosomia in newborns of women with gestational diabetes mellitus

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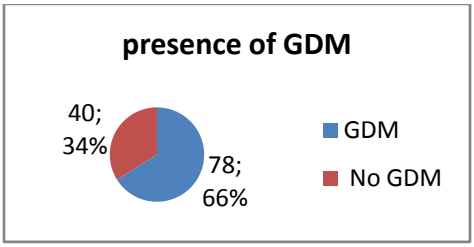
Objective: impact of glucose values from 75-g oral glucose tolerance test (OGTT) on large for gestational age (LGA) newborns from gestational diabetes mellitus (GDM) singleton

Material and methods: 118 were prospectively screened for GDM between 24 and 28 weeks of pregnancy with 75-g OGTT in Outpatient Department of Clinics for Endocrinology, Diabetes and Metabolic Disorders. Age, body mass index (BMI) before pregnancy and before delivery, glycosylated haemoglobin (HbA1c), 2-hour 75-g OGTT, neonatal birth weight, delivery mode, and gestational week of delivery at University Clinic for Ob/Gyn-Skopje were determined in all women.



Results: The study included 118 pregnant women: 78 (66,1%) with GDM, and 40 (33,9%) without GDM. Twenty-one (30.4%) of the neonates in the GDM group were LGA (adjusted weight at or above the 90th percentile). This proportion significantly differed from the proportion (5.5%) of the control group (p<0,01). There were significant correlations between LGA from GDM pregnancies with BMI before pregnancy, BMI before delivery, fasting, and 1-hour OGTT plasma glucose levels (r = 0.36, 0.36, 0.46 and 0.23 respectively, p < 0.05 glucose levels

GDM *78(66.1%)*	P value(<0.05)
LGA(>90thpercentile)	
21(30.4%)	
BMI(before pregnancy)	0.36
BMI(before delivery)	0.36
Fasting PGL	0.46
1-hour oGTT	0.23

Gestation week of delivery and fasting glucose levels were independent predictors for LGA (Beta=0.58 and Beta=0.37 respectively, p<0.001). Areas under the receiver operator characteristic curve **(AUC)** were compared for the prediction of LGA. The AUC were: 0.782 (0.685-0.861) for fasting, 0.719 (0.607-0.815) for 1-hour and 0.51 (0.392-0.626) for 2-hour OGTT plasma glucose levels.

Bibliography

1. The impact of adoption of the International Association of Diabetes in Pregnancy Study Group criteria for the screening and diagnosis of gestational diabetes. American journal of obstetrics and gynecology : 2014 Aug 27 pgMayo K, Melamed N, Vandenberghe H, Berger H
2. HAPO study group.New Eng J Med 2008;351:1991-2002
3. NICE clinical guideline 63. Issued: March 2008 last modified: July 2008
4. Diagnostic Criteria and Classification of Hyperglycaemia First Detected in Pregnancy.WHO