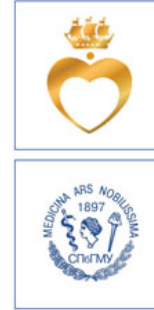


VITAMIN D DEFICIENCY IN RUSSIAN PREGNANT WOMEN AND RISK FOR GESTATIONAL DIABETES



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Introduction: Some, but not all, previously published studies suggest that low vitamin D status may be associated with increased risk of gestational diabetes (GDM). We examined the association of plasma 25-hydroxyvitamin D (25(OH)D) concentration with GDM risk and neonatal macrosomia.

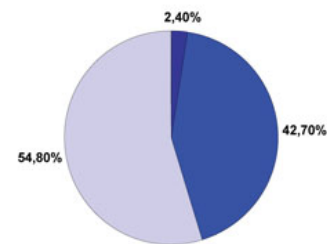
Methods: 143 women were recruited before 15 weeks of gestation and were followed up until delivery. Maternal plasma 25(OH)D concentrations were measured at 8-14 weeks of gestation. 2-h 75-g oral glucose tolerance test (OGTT) was performed between 24 and 28 weeks of gestation. GDM was diagnosed according to IADPSG criteria. The neonatal anthropometry was also measured.

Characteristics of Pregnant Women with GDM and controls

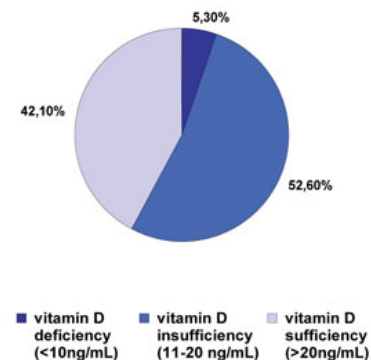
Variable	GDM Group	Control Group	P
N	19	124	
Age (years)	32,3±4,8	29,8±4,6	0,046
Family history of T2DM	44%	35%	0,442
Pre-BMI (kg/m ²)	25,6±4,9	23,3±4,5	0,045
Waist girth (cm) at 8-14 weeks	87,0±12,0	80,2±10,2	0,024
FPG (mmol/L) at 8-14 weeks	5,06±0,50	4,74±0,59	0,025
25OHD (ng/mL) at 8-14 weeks	21,8±8,5	21,9±9,2	0,983
Newborn's weight (kg)	3,768±0,492	3,458±0,537	0,061
Use of Vitamin D supplements in the 1 st trimester	21,4%	18,8%	0,729
Use of Vitamin D supplements by the time of OGTT	57,1%	56,3%	1,00

Note. GDM, gestational diabetes mellitus; DM, diabetes mellitus; BMI, body mass index; FPG, fasting plasma glucose; 25OHD, 25-hydroxyvitamin D OGTT, oral glucose tolerance test.

Controls



GDM



Conclusion: Early pregnancy vitamin D deficiency and insufficiency were very common in the studied population of pregnant women. There was no association between maternal 25(OH)D and gestational diabetes.