Twenty-two years results of the Israeli-Georgian program diabetes in pregnancy OP-0097

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Background: The Israeli-Georgian Program Diabetes in Pregnancy was initiated at the Georgian Diabetes Center in 1997, with the aim to provide care for women with diabetes. The Program has become possible as a result of Twinning between Union of Diabetes and Endocrine Association and Israeli Diabetes Association. It was initiated in 1997, and since then it successfully works, being the longest and most sustainable Twinning program in Europe.

The aim to assess the efficacy of treatment in women with pre-GDM and GDM. **Methods:** In total, 407 women with type 1 preexisting diabetes (mean age 23±6 yrs, diabetes durations 12.4±7.5 yrs) and 119 women with gestational diabetes (GDM) were enrolled in the study. The patients were divided into 4 groups (Gr.): Gr.1 - 223 patients who received specialized pre-conception care; Gr.2 -118 patients enrolled in the program at < 10 weeks of gestation; Gr.3 - 66 patients enrolled in the program at > 10 weeks of gestation; Gr.4 - 119 women with GDM. **Results:** At entry HbA1c(%) levels for Gr.1, 2, 3 and Gr.4 were: 8.12 (0.05), 9.08 (0.6), 8.09 (1.6), 6.7(0.9) respectively; By the end of preconception care HbA1c levels in Gr.1 - 6.0(0.65)% were statistically lower in Gr.2 and 3 (P=0.000). By term HbA1c levels statistically decreased in all the groups (P=0.024, P=0.000, P=0.000, respectively). The rate of spontaneous abortions was lower in Gr.1 (2.24%), than in Gr.2 (8.4%) P=0.000. In Gr.1patients percent of pre-eclampsia (0.44%) was lower, than in Gr.2(8.4%) and Gr.3 (10.6%) (P1-2 =0.0005; P1-3 = 0.0002). No statistical difference between Gr.1 and Gr.4 was revealed. In Gr.1patients percent of preterm deliveries was lower, than in Gr.2 and Gr.3 (P1-2 =0.0014; P1-3 = 0.0001). No statistical difference between Gr.1 and Gr.4 was revealed. In Gr. percent of macrosomia was lower, than in Gr.2 and Gr.3 (P1-2 =0.0074; P1-3 = 0.0101); and in Gr. 1 and 4 (10.47 – 11.7%) – no statistical difference was observed. Perinatal mortality was observed in Gr.1 – 1.79%, in Gr.2 - 4.23% in Gr.3 - 7.5% and in Gr.4 -1.68% (P1-2 =0.0944; P1-3 = 0.0129; P1-4 =0.7265). **Conclusion:** In patients with Pre-GDM and GDM good glycemia control during pregnancy significantly reduces the risk of spontaneous abortions, pre-eclampsia, preterm delivery, and perinatal deaths. No retinopathy progression is observed, when women are well-controlled throughout their pregnancies. This

Table 2. Clinical Data in Women with Preexisting DM and Women with GDM

	Gr.1 (N=223)	Gr.2 (N=118)	Gr.3 (N=66)	Gr.4 (N=119)
Age (years)	22.9 ± 4.6	23.5 ± 5.1	23.2 ± 4.1	25.9 ± 5.3
Diabetes duration (years)	10.9 ± 7.2	11.7 ± 6.4	9.8 ± 6.9	-
Preconception care	Yes	no	no	no
Pre-pregnancy BMI (kg/m2)	21.6 ± 3.6	22.4 ± 2.4	23.3 ± 1.9	24.8 ± 4.9
HbA1c (%) before treatment	8.12 ± 0.5	9.08 ± 0.6	8.09 ± 1.6	6.7 ± 0.9
Preproliferative retinopathy (%)	8.96	13.5	13.63	-
Microalbuminuria (%)	6.27	11.86	16.6	10.08

	Gr.1 N = 223	Gr.2 N = 118	Gr.3 N = 66	Gr.4(GDM) N= 119
Spont.abort. (%)	1.7	7.62	-	-
Cesarean section (%)	59.1	68.6	76.3	50.4
Preterm delivery (%)	3.58	15.23	21.21	8.40
Birth weight (g)	3443 ± 515.4	3488 ± 491.1	3577 ± 642.3	3495 ± 493.5
Stillbirth (%)	1.34	2.54	4.54	0.84
Neonatal death(%)	0	1.69	3.03	0.84
Perinatal mortality per 1000 births	13.4	42.3	75.7	16.8