LOW SOCIOECONOMIC STATUS AS A RISK FACTOR FOR GESTATIONAL DIABETES

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Numerous studies found an inverse association between type 2 diabetes and socio-economic status [1-2]. Gestational diabetes is a condition at risk of subsequent type 2 diabetes and the epidemiology and pathogenesis of these two disorders are quite similar [3]. However, it is not known if socio-economic status might be a risk factor for gestational diabetes.

All pregnant women presenting at our Department of Obstetrics and Gynecology had a routine screening test (50gr glucose) at 24-28 weeks. A positive result (1-h serum glucose \( > 7.8 \text{ mmol/l} \)) was followed, 1-2 weeks later, by a 3-h OGTT with 100gr glucose, performed in the morning after an overnight fast of 8-14 h and after at least 3 days of unrestricted diet and physical activity, using cut-off values previously proposed [4] for extrapolation of the whole blood glucose values to plasma or serum glucose concentrations [5]. Gestational diabetes and IGT were diagnosed when \( \geq 2 \) or 1 serum glucose concentrations exceeded these cut-off levels, respectively. The first consecutive 100 IGT, 150 diabetic and 450 normoglycemic women were selected for the present study. All women gave informed consent and the procedures were in accordance with the Helsinki Declaration of 1975. Socio-economic status was assessed by education levels (primary school, high school, university) and current employment [6].

As reported in Table I, patients with the lowest level of education (primary school) were significantly younger, heavier and smaller and had more frequently previous pregnancies, parental type 2 diabetes and gestational diabetes (the frequency of IGT was not significantly different among the three groups). Their number of weekly working hours was significantly lower. Among these women 31.3% were housewives, 27.4% workwomen, 37.8% employees and 0.4% managers, whereas the corresponding percentages in graduate women were, respectively, 5.1%, 1%, 56.7% and 36.1%. Gestational diabetes was present in 31.1% of workwomen, 28% of housewives, 18.5% of employees and 10.5% of managers. The highest prevalence of gestational diabetes (38.6%) was found in housewives with primary school level of education. In a multiple logistic regression model, after adjustment for age, BMI, parental diabetes, and previous pregnancies, a higher level of education was associated with a reduced risk of gestational diabetes (OR = 0.61; 95%CI 0.4-0.9, p = 0.014), while being a workwoman (OR = 1.73; 95%CI 1.1-2.9, p = 0.032) or a housewife with primary school (OR = 1.87; 95%CI 1.1-3.2, p = 0.019) was associated with an increased risk of gestational diabetes.

In conclusion our data support the association between gestational diabetes and lower social status. Women with lower level of education displayed more risk factors for gestational diabetes; they were heavier, smaller, had more pregnancies [3, 7], and had a higher percentage of parental diabetes, confirming the association between type 2 diabetes and socioeconomic status [1-2]. Nevertheless, after adjustment for these variables, level of education and current employment remained significantly associated with gestational diabetes. These data are in line with recent studies, suggesting a relationship between the metabolic syndrome and lower education levels in women [6, 8-9], and provide more evidence for the increased demand for health care resources and primary prevention for groups with lower socioeconomic status.
REFERENCES


