

Predictive risk factors for hypertensive disorders in patients with gestational diabetes: a cohort study

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Objective. Hypertensive disorders in pregnancy (HDP) and gestational diabetes mellitus (GDM) represent two significant maternal cardiometabolic disorders closely related to each other. The study aim is to identify any gestational hypertension predictive risk factors in patients with GDM in our population.

Materials and Methods. This cohort study took place at the Department of Obstetrics and Gynecology, Policlinico "G. Martino" of Messina from January 2012 to December 2019; the study consisted of 684 pregnant women affected by GDM, diagnosed by Oral Glucose Tolerance Test (OGTT) according to Italian Guidelines. A medical history has been performed to identify any predictive risk factors for HDP. Patients with pre-gestational hypertension or diabetes were excluded.

Results. 684 pregnant women affected by GDM were enrolled:

478 (69.9%) had only one altered OGTT value, 137 (20.1%) two values and 69 (10%) all values. The mean age was 33 years; the mean pre-gestational BMI was 28; 3.1% had a GDM in the previous pregnancy; 340 (49%) had familiarity for GDM. 137 (20.1%) were treated with insulin. 70 of them had a diagnosis of HDP (10.2%).

Significant difference for pre-gestational BMI ($p < 0.01$) and percentage of obesity ($p < 0.003$) between groups is present. Moreover, there is an interesting difference between the mean of glycaemia after one hour of glucose uptake ($p < 0.001$), with a significant correlation between positive glycaemic value at 60' and hypertensive disorders ($p < 0.001$).

Conclusions. Obesity and glycaemia above the cut-off after 1 hour during OGTT are predictive risk factors of hypertensive disorders in patients affected by GDM.