ADIPOCYTOKINES, INSULIN RESISTANCE AND OBESITY COHERENCE IN WOMEN WITH PREVIOUSLY DIAGNOSED GESTATIONAL DIABETES

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Introduction: Adipose tissue is a major source of adipocytokines. It plays an important role for the development of insulin resistance(IR). One aspect of the pathophysiology of gestational diabetes(GDM) is also IR. The relationship between adipocytokines and GDM might be closely associated. **Aim**: To evaluate the coherence of body composition with adipocytokines (adiponectin and leptin) and IR in women with previously diagnosed GDM. **Methods**: We examined 80 women with previously (16-43 years ago) diagnosed GDM. BMI was evaluated. Fasting plasma glucose(FPG) was examined for women with diabetes mellitus(DM). Oral glucose tolerance test was performed to evaluate the carbohydrate metabolism for the rest. Leptin and adiponectin were evaluated for fat metabolism assessment. IR was calculated with HOMA-IR index. The results were considered statistically significant at p0.05. **Results**: Women during the investigation period were 55.14±8.26years (39-77years). Strong correlation between adipocytokines and BMI was observed: increased BMI determined decreased adiponectin (r=-0.304;p=0.006), and increased leptin concentrations (r=0.871;p0.001). The mean of adiponectin concentration was 27.48±15.05 in women with normal BMI (N=21) and 21.26±7.65 in overweight women (N=17). The mean of leptin concentration was 6.93±4.55 in normal BMI women; 11.74±4.48 in overweight. The mean of adiponectin and leptin concentrations in obese women were respectively: Iº obesity (N=17) - 19.12±9.84; 19.41±6.05, IIº obesity (N=13) - 18.06±6.19; 23.62±7.74, IIIº obesity (N=12) 16.07±6.4; 49.0±17.72. No significance between adiponectin and insulin concentrations was defined. Strong correlation between leptin and insulin concentration (r=0.624, p0.001) either IR (r=0.489; p=0.03) was observed. The positive correlation between leptin and FPG (r=0.336; p=0.004) was found. No other significant difference between adipocytokines and carbohydrate metabolism was found(p0.05). **Conclusion**: Adipocytokines are closely linked to the amount of fat tissue in the body: increased BMI correlates with decreased adiponectin and increased leptin levels in women with previously diagnosed GDM. Higher leptin concentration was associated with increased IR and higher FPG.