General

PP-089

Noninvasive Assessment of Subclinical Atherosclerosis in Normotensive Patients with Gestational Diabetes

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Background: Carotis artery intima-media thickness, hyperhomocysteibemia, microalbuminuria and nitric oxide reflects subclinical atherosclerosis and predict the risk of future cardiovascular events. We aimed to evaluate subclinical atherosclerosis and endothelial dysfunction in normotensive patients with gestational diabetes mellitus (GDM) noninvasively.
Methods: Fourty one normotensive patients with GDM and 44 healthy pregnants were enrolled. Serum homocystein and nitric oxide levels, urinary albumin excretion (microalbuminuria) and carotis intima-media thickness (CIMT) were evaluated along with lipid parameters and anthropometric measurements.
Results: Patients with GDM had significantly higher levels of serum homocystein, urinary albumin excretion and increased carotid intima-media thickness ($p<0,001$, $p=0,005$ and $p<0,001$; respectively). Nitric oxide levels were significantly diminished in patients group ($p<0,001$). There was a significant difference between groups in terms of LDL, but not with HDL and trygliceride. A significant correlation was observed between CIMT and serum LDL, HDL, homocytein, nitric oxide levels, and urinary albumin excretion. Microalbuminuria was significantly correlated with serum homocystein levels ($p=0,03$) but not with NO.
Discussion: Independent from elevated blood pressure, subclinical atherosclerosis and endothelial dysfunction exist in normotensive patients with GDM. Further studies with large number of participants are required to clarify this data.

Table 1

	Patients (n=37)	Control Subjects (n=38)	p value
Age (years)	28,1±5,2	27,7±5,7	NS
Parity (n)	3,14 ±1,5	2,1±1,6	P=0,002
Interval between pregnancies (years)	2,06±0,23	2,51±0,27	p=0,004
Weight (kilograms (kg))	66,4±11	65,2±10	NS
BMI (kg/m2)	32,2±4,8	27,3±4,2	P=0,02
Weight gain (kg)	9,2±2,5	6,7±2,1	P<0,02
Glukoz (mg/dl)	153±23	88±14	P<0,001
Microalbuminuria (mg/mmol)	15,07±1,47	6,43±1,03	p=0,005
Carotis Artery IMT (right) (mm)	0,63±0,15	0,42±0,11	p<0,001
Carotis Artery IMT (left) (mm)	0,61±0,16	0,40±0,11	p<0,001
Homocysteine (mmol/L)	9,57±4,46	5,91±3,87	P<0,001
Nitric Oxide (μmol/L)	11,51±2,36	14,26±2,61	P<0,001
Total cholesterol (mg/dl)	221±32	158±25	P<0,001
LDL-cholesterol (mg/dl)	142±28	78±24	P=0,03
HDL-cholesterol (mg/dl)	43±5	49±5	NS
Trygliceride (mg/dl)	205±35	150±59	NS
Creatinine (mg/dl)	0,77±0,1	0,67±0,1	P=0,002

Comparison of carotid artery intima-media thickness, microalbuminuria, serum homocystein, nitric oxide levels, biochemical and demographical data between patients and controls

Table 2

Variables	CIMTr p	Microalbuminuriar p	Homocysteinr p	Nitric Oxider p
Age	0,338 0,001	0,192 NS	0,232 0,03	0,297 0,004
BMI	0,331 0,002	0,234 0,04	0,201 NS	0,196 NS
Weight gain	0,376 <0,001	0,339 0,001	0,288 0,01	0,204 NS
Glucose	0,244 0,03	0,388 <0,001	0,229 NS	0,188 NS
Creatinine	0,226 0,04	0,387 <0,001	0,247 0,02	0,176 NS
LDL	0,391 <0,001	0,259 0,02	0,190 NS	0,349 <0,001
Trygliceride	0,198 NS	0,167 NS	0,181 NS	0,179 NS
HDL	0,387 0,001	0,221 0,04	0,203 NS	0,334 0,001
CIMT	_ _	0,252 0,02	0,257 0,02	0,229 0,03
Microalbuminuria	0,252 0,02	_ _	0,248 0,03	0,177 NS
Homocystein	0,257 0,02	0,248 0,03	_ _	0,326 0,002
Nitric Oxide	0,229 0,03	0,177 NS	0,326 0,002	¬_ _

Correlation between carotid artery intima media thickness, microalbuminuria, serum homocystein, nitric oxide levels, biochemical and demographical data

PP-090

Prevalence of Metabolic Syndrome in Young Patients with ST Elevation Myocardial Infarction and Association of Coronary Artery Lesions

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Background: Metabolic syndrome (MetS) occurs as a result of genetic and environmental factors. The patients are evaluated by criteria of the National Cholesterol Education Program Adult Treatment Panel III (NCEP ATP III). Factors characteristics of the metabolic syndrome are abdominal obesity, atherogenic dyslipidemia (elevated triglyceride, small LDL particles, low HDL cholesterol), raised blood pressure, insulin resistance (with or without glucose intolerance), and prothrombotic and proinflammatory states. MetS and its components are associated with increased risk of cardiovascular disease in young patients as well as elderly patients. About 10% of patients with ST elevation myocardial infarction (STEMI) are 45 years of age or less.
Methods: In the present study, 141 STEMI patients younger than 46 years old admitted to coronary intensive care unit were assessed by criteria of the NCEP ATP III and we investigated that prevelance of MetS, the distribution of MetS parameters and relationship with coronary artery lesions. All patients underwent coronary angiography and results were analyzed.
Results: The average age of the patients was 38.3±4.6. These patients were predominantly male (87.9%). MetS was detected in 46.8% of all patients. The rate was 45% for women, 40% for men. Abdominal obesity (female 54%, male 22%), low HDL cholesterol (female 90%, male 62%), and raised blood pressure (female 45%, male 37%) were more common in women than in men. Hypertriglyceridemia (female 45%, male 50%) and insulin resistance (female 27%, male 34%) were more common in man than women (figure1). Single-vessel involvement was 45% among patients. The most common vessel was left anterior descending artery in both gender.
Conclusions: MetS is quite common in young patients with STEMI as well as elderly. In our study, low HDL cholesterol levels were the most common risk factor in both female and male patients. The second most frequent risk factor was abdominal obesity in female, hypertriglyceridemia in male. MetS was independent of LDL cholesterol plays an important role in the etiopathogenesis of coronary artery disease. MetS is widespread in our country, as well as all over the world so more effectively fight against MetS is required.