

Table 1: Characteristics of obese children and non-obese healthy controls.

Characteristics	Obese children (n=89)	Controls (n=40)	p*
Age (y)	12.6±2.3	13.2±2.2	0.225
Gender Girl (n[%])	41 (46.1%)	21 (52.5%)	0.499
Prepuberty (n[%])	31 (34.8%)	10 (25%)	0.267
Puberty (n[%])	58 (65.2%)	30 (75%)	
Weight (kg)	73.3±20.6	45.4±12.5	<0.001¶
Height (cm)	153±20.3	154.2±13.8	0.980¶
BMI (kg/m ²)	30±4.6	18.4±2.4	<0.001¶
BMI-SDS	2.7±0.37	-0.02±0.94	<0.001¶
Waist/hip	0.94±0.05	0.82±0.07	<0.001¶
SBP (mmHg)	115.6±9.7	105.7±11.2	0.001¶
DBP (mmHg)	72.7±7.7	74.2±7.8	0.116¶
Data are presented as proportions/percentages and the mean value±SD.			
*Student's test and Chi-square test			
BMI - body mass index; DBP - diastolic blood pressure; SBP - systolic blood pressure; SDS - standard deviation score			

Table 2: Hematological variables in obese children and non-obese children

Hematological variables	Obese children (n=87)	Control group (n=40)	p*
Erythrocyte (million/mm ³)	4.7±0.4	4.8±0.4	0.889
Hemoglobin (g/dL)	13.2±1.1	13.6±1.2	0.046
Hematocrit (%)	39.2±3.1	40.1±3.1	0.140
Total leukocyte count (10 ⁹ /L)	8.51±1.7	7.32±1.2	<0.001
Platelet count (10 ⁹ /L)	294±62	261±53	0.001
MCV (fL)	80.5±4.0	83.2±4.7	0.003
MCH (pg/eritrosit)	27.8±1.6	28.7±1.6	0.445
MCHC (g/dL)	33.9±1.0	34.0±0.7	0.396
RDW (%)	14.0±0.9	13.5±0.8	0.012
Absolute neutrophil count (10 ⁹ /L)	5.0±1.5	3.7±1.2	<0.001
Absolute lymphocyte count (10 ⁹ /L)	2.80±0.86	2.50±0.69	0.097
Absolute monocyte count (10 ⁹ /L)	0.58±0.20	0.54±0.18	0.408
Absolute eosinophil count (10 ⁹ /L)	0.17±0.17	0.16±0.15	0.784
Absolute basophile count (10 ⁹ /L)	0.015±0.03	0.015±0.03	0.876
Data are presented as the mean value±SD.			
* Student's test and Mann Whitney U test			
MCH - mean corpuscular hemoglobin; MCHC - mean corpuscular hemoglobin concentration; MCV - mean corpuscular volume; RDW - red cell distribution width			

Table 3: Biochemical parameters, TSH, fasting insulin, HOMA-IR, Lp (a), homocysteine, fibrin monomers and D-dimer levels in obese children and non-obese children

Variables	Obese children (n=89)	Control group (n=89)	P*
Fasting glucose (mg/dL)	87.4±7.6	87.8±7.8	0.863
AST (U/L)	26.8±8.8	23.6±6.1	0.008
ALT (U/L)	24.33±13.70	15.90±5.90	<0.001
Triglycerides (mg/dL)	132.06±74.30	105.10±43.30	0.058
Total cholesterol (mg/dL)	167.21±31.30	151.02±24.70	0.004
High-density lipoprotein cholesterol (mg/dL)	50.85±13.90	49.07±13.07	0.565
Low-density lipoprotein cholesterol (mg/dL)	89.29±30.1	84.67±21.40	0.321
TSH (mIU/L)	2.5±1.2	2.7±1.5	0.465
Insulin (µU/mL)	17.9±11.3	11.4±7.7	<0.001
HOMA-IR	3.78±2.58	2.45±1.65	0.001
Lipoprotein (a) (mg/L)	178.26±172	147.07±126.02	0.146
Homocysteine (µmol/L)	13.10±5.05	9.03±4.2	<0.001
Fibrin monomers (µg/mL)	6.9±7.9	5.2±2.5	0.740
D-dimer (µg/mL)	0.34±0.28	0.41±0.50	0.747

Data are presented as the mean value±SD.

* Student's test and Mann Whitney U test

AST: - aspartate aminotransferase; ALT - alanine aminotransferase; HOMA-IR - Homeostasis model assessment of insulin resistance; TSH - Thyroid-stimulating hormone

Table 4. Carotid artery IMT measurements in obese and non-obese control subjects

Location	Obese children (n=89)	Healthy controls (n=40)	p*
Right carotid artery IMT (mm)	0.45±0.08	0.42±0.05	0.057
Left carotid artery IMT (mm)	0.46±0.06	0.43±0.03	0.003
P**	0.012	0.477	
Mean carotid artery IMT (mm)	0.46±0.06	0.43±0.04	0.002

IMT: intima media thickness

*Mann Whitney U test (Critical $p < 0.025$ using Bonferroni correction) was used to make comparison of right and left side between the groups.

**Wilcoxon Signed Ranks Test (Critical $p < 0.025$ using Bonferroni correction) was used to determine the difference in right and left side within the group.

Table 5: The correlation between the clinical characteristics and mean CIMT in obese children

Variables	Mean CIMT p*	Mean CIMT r
Weight (kg)	0.067	0.195
Height (cm)	0.085	0.184
BMI (kg/m ²)	0.335	0.103
Waist/hip	0.224	-0.130
SBP (mmHg)	0.177	0.144
DBP (mmHg)	0.984	0.002
<p>*Pearson correlation analyses</p> <p>BMI - body mass index; CIMT - carotid intima media thickness; DBP - diastolic blood pressure; SBP - systolic blood pressure; SDS - standard deviation score</p>		

Table 6: The correlation between mean CIMT and hematological parameters in obese children

Variables	Mean CIMT	Mean CIMT
	p*	r
Erythrocyte (million/mm ³)	0.271	-0.119
Hemoglobin (g/dL)	0.012	-0.268
Hematocrit (%)	0.429	-0.085
Total leukocytes (10 ⁹ /L)	0.775	0.031
Platelets (10 ⁹ /L)	0.019	-0.250
MCV (fL)	0.313	-0.109
MCH (pg/eritrosit)	0.615	-0.054
MCHC (g/dL)	0.002	-0.322
RDW (%)	0.004	0.306
Absolute neutrophil count (10 ⁹ /L)	0.096	0.178
Absolute lymphocyte count (10 ⁹ /L)	0.132	0.162
Absolute monocyte count (10 ⁹ /L)	0.931	0.009
Absolute eosinophil count (10 ⁹ /L)	0.104	-0.174
Absolute basophile count (10 ⁹ /L)	0.620	-0.05
*Pearson correlation analyses		
CIMT - carotid intima media thickness; MCH - mean corpuscular hemoglobin; MCHC - mean corpuscular hemoglobin concentration; MCV - mean corpuscular volume; RDW - red cell distribution width		

Table 7: The correlation between mean CIMT and serum biochemistry, lipid profile, TSH, fasting insulin, HOMA-I, Lp (a), homocysteine, fibrin monomers and D-dimer in obese children

Parameters	Mean CIMT p*	Mean CIMT r
Fasting glucose (mg/dL)	0.728	-0.038
AST (U/L)	0.895	-0.014
ALT (U/L)	0.726	0.038
Triglycerides (mg/dL)	0.699	0.042
Total cholesterol (mg/dL)	0.619	0.053
High-density lipoprotein cholesterol (mg/dL)	0.563	-0.026
Low-density lipoprotein cholesterol (mg/dL)	0.810	0.062
TSH (mIU/L)	0.739	-0.036
Insulin (μ U/mL)	0.734	0.037
HOMA-IR	0.868	0.018
Lipoprotein (a) (mg/L)	0.006	0.294
Homocysteine (μ mol/L)	0.559	0.063
Fibrin monomers (μ g/mL)	0.030	-0.233
D-dimer (μ g/mL)	0.698	0.043

*Pearson correlation analyses

AST - aspartate aminotransferase; ALT - alanine aminotransferase; HOMA-IR - Homeostasis model assessment of insulin resistance; TSH - Thyroid-stimulating hormone

