ASSESSMENT OF CARDIOMETABOLIC RISK FACTORS IN ASYMPTOMATIC CHOLELITHIASIS

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Aim: Obesity is an established risk factor for cholelithiasis. We aimed to compare the levels of cardiometabolic risk factors between patients with asymptomatic gallstones and healthy controls. We also aimed to assess correlations among cardiometabolic risk factors in cholelithiasis and healthy controls.

Material and method: Fifty-five women and 25 men, a total of 80 subjects with asymptomatic cholelithiasis and 25 women and 15 men, a total of 40 healthy controls were accepted to the study. Fasting blood glucose, insulin, lipid profile, CRP, ALT, AST, GGT were measured by an autoanalyzer with commercial kits and HOMA-IR was calculated. The differences between groups were compared by nonpaired Student’s t test for normally distributed parametric variables and by Mann-Whitney U test for abnormally distributed parametric variables. Pearson or Spearman correlation analysis was performed as appropriate.

Results: The mean age and standard deviation of the cholelithiasis group was 51±14, and of the control group was 51±12 years. There was no difference in age, body mass index (BMI), fasting blood glucose, triglyceride, CRP, ALT, AST and GGT levels between the cholelithiasis and control group (p>0.05). In the cholelithiasis group total cholesterol, insulin and HOMA-IR were significantly higher than healthy controls and LDL-C and HDL-C were significantly lower (p<0.05). In the control group, there was a positive correlation between age and insulin, age and HOMA-IR, BMI and insulin levels. In the cholelithiasis group there was a significant correlation between age and triglycerides, age and total cholesterol, age and HOMA-IR, BMI and fasting blood glucose, BMI and insulin, BMI and triglycerides, BMI and total cholesterol, BMI and HOMA-IR. There was no significant correlation between HOMA-IR and the measured cardiometabolic risk factors in the control group. There was a positive correlation between HOMA-IR and triglyceride, HOMA-IR and total cholesterol but a negative correlation between HOMA-IR and HDL-C in the cholelithiasis group. Conclusion: Subjects with asymptomatic cholelithiasis are more insulin resistant, have higher total cholesterol levels and have lower LDL-C and HDL-C levels than asymptomatic controls. There were more significant correlations among age, BMI, HOMA-IR and cardiometabolic risk factors in the cholelithiasis group than in the control group.