

ABSTRACT

Cardiovascular diseases are one of the prominent causes of morbidity and mortality. Determination of risk factors associated with cardiovascular diseases is important in taking preventive measures. In the present study, evaluation of the role of widely used low-dose oral contraceptives as a risk factor for cardiovascular diseases was aimed.

A retrospective, randomized, controlled study was conducted in Adnan Menderes University, Faculty of Medicine, Department of Obstetrics and Gynecology, between June 2008 and October 2008. A total of 28 subjects using two distinct oral contraceptives (20 µg ethinyl estradiol+100 µg levonorgestrel or 150 µg desogestrel) and 24 subjects (control group) using a different birth control method than hormone treatment, were compared in terms of parameters that were considered as risk factors for cardiovascular diseases. Total cholesterol, HDL, LDL and VLDL-cholesterol and triglyceride levels were measured in order to assess lipid profiles of the subjects. In addition, homocystein, plasminogen activator inhibitor-1 (PAI-1) and interleukin-6 (IL-6) levels that were reported as risk factors for cardiovascular diseases were measured. In order to compare these parameters between control group and oral contraceptive groups the following tests were used: Independent-sample t-test, Mann-Whitney U test, One-Way ANOVA test and Kruskal-Wallis test. The correlation between the data groups was analyzed using Pearson (for parametric data) and Spearman (for nonparametric data) tests. Statistically significance level is accepted as p less than 0.05.

No statistically significant difference was found between control and oral contraceptive groups, in terms of total cholesterol, HDL, LDL, VLDL, triglyceride, homocysteine, PAI-1 and IL-6.

Based on present data, it is concluded that the use of low-dose oral contraceptives by healthy subjects without any initial risk factor does not contribute an additional risk in terms of cardiovascular diseases and can be used safely in birth control in these subjects.

Keywords: Oral contraceptives, cardiovascular risk, homocysteine, PAI-1, IL-6

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