Abstract

Introduction: Cigarette smoking increases the risk of sudden cardiac death. Smoking may predispose to ventricular fibrillation and sudden cardiac death by altering ventricular repolarization and enhancing sympathetic nervous system activity. We aimed to study the effects of smoking on ventricular repolarization.

Methods: We studied 47 healthy subjects. 24 long-term heavy smokers (10 women, mean age: 40±5 years) constituted the study group. 23 non-smokers (10 women, mean age: 42±10 years) constituted the control group. ECG was obtained from all subjects. Tp-e interval, Tp-e/QT ratio, Tp-e/QTc ratio were measured. These parameters were compared between the groups.

Results: There was no significant difference at the basic clinical and echocardiographic variables (p>.05). QT interval and QTc interval were similar between smokers and nonsmokers. Tp-e interval (p=.001) and Tp-e/QT (p=.003) ratio were higher in heavy smokers compared to non-smokers whereas Tp-e/QTc ratio (p=.13) was marginally higher in smokers. Other ECG parameters were similar between smokers and nonsmokers groups.

Conclusion: Tp-e interval and Tp-e/QT ratio are prolonged in heavy smokers.