

The Impact of Cilostazol on Heart Rate and Arrhythmias by Holter Monitoring after Drug-Eluting Stent Implantation in Coronary Artery Disease

Cilostazol may have chronotropic or pro-arrhythmic effect despite beneficial effects on vasodilation and antiplatelet aggregation. The aim of this study was to determine the impacts of cilostazol on heart rate and arrhythmias in patients undergoing intracoronary drug-eluting stents. This randomized prospective trial compared triple antiplatelet therapy (aspirin, clopidogrel, and cilostazol, TAT, n = 113) and dual antiplatelet therapy (aspirin and clopidogrel, DAT, n = 114) at baseline and 6-month. The primary end points were 24-hour heart rate (24h-HR), 24h-HR >70 bpm, and 24h-HR increase >5 bpm at 6-month follow-up using Holter monitoring. The two groups had similar baseline characteristics. At 6-month follow-up, the 24h-HR (75.4 ± 11.7 bpm vs 69.3 ± 10.0 , $p < 0.001$), presence of 24h-HR >70 bpm (71.4% vs 47.1%, $p < 0.001$), and presence of 24h-HR increase >5 bpm (44.8% vs 24.5%, $p = 0.002$) were significantly higher in the TAT versus DAT group. Multivariate analysis showed that use of cilostazol (OR: 3.10, 95% CI: 1.08 to 8.89) and baseline 24-HR < 70 bpm (OR: 4.60, 95% CI: 1.16–13.14) were strong predictors of 24h-HR increase >5 bpm at follow-up. In addition, 24h total counts of PVCs (472 ± 1497 beats vs 86 ± 209 beats, $p = 0.016$) was significantly higher in the TAT. In conclusion, cilostazol in addition to DAT appears to result in an increase in 24h-HR and total counts of PVCs after DES implantation. Some caution should be exercised for the use of cilostazol in patients with tachycardia or a large number of PVCs.