Antioxidant Effects of Carvedilol and Alluporinol in Patients with Diabetes Type II; A Randomized, Double-Blind Placebo-Controlled Clinical Trial

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Antioxidant Effects of Carvedilol and Alluporinol in Patients with Diabetes Type II; A Randomized, Double-Blind Placebo-Controlled Clinical Trial [bold]Background[/bold]: Diabe [bold]Background[/bold]: Diabetes type II is associated with oxidative stress while Carvedilol and Allopurinol has been shown to have antioxidant properties, which are thought to account for the protective effects. Objective of this study was to compare the short-term effects of Carvedilol, Allopurinol and placebo on oxidative stress status in patients with diabetes type II. [br][bold]Material and methods:[/bold] Eighty one patients were randomly assigned to four different groups: Carvedilol (6.25 mg TDS, n=20), placebo (n=20) and Allopurinol (100 mg TDS, n=20), placebo (n=21).The patients were received their treatment for two weeks. Fasting blood sugar (FBS), HbA[sub]1[/sub]c, total antioxidant capacity (FRAP test) and lipid peroxidation (TBARS assay) in plasma and saliva were measured before and after treatment.[br][bold]Results:[/bold] No significant differences in oxidative stress status, FBS and HbA[sub]1C[/sub] were seen among placebo and Carvedilol groups[bold], [/bold]and also in HbA[sub]1C[/sub] and FBS levels between Allopurinol and placebo group.[br][bold]Conclusion: [/bold]It is concluded that Allopurinol and Carvedilol are not more effective than placebo in reduction of oxidative stress in diabetic patients. However, to elaborate the exact role of Allopurinol and Carvedilol in diabetes, further large randomized clinical trials with longer time are needed. The same trend of changes in blood and saliva shown for oxidative stress indices was interesting and suggests a chance for saliva to be valuable in diagnosis of oxidative stress. BAGHER LARIJANI, MOJGAN AFSHARI, ALIREZA MOJTAHEDI, FATEMEH ASTANEHI-ASGHARI, ARASH HOSSEIN-NEZHAD, RAMIN HESHMAT, ALI REZAIE, MOHAMMAD JAFAR ZAMANI, SARA MOSTAFALOU, MOHAMMAD ABDOLLAHI 2132-PO Tehran, Islamic Republic of Iran Clinical Therapeutics/New Technology - Pharmacologic Treatment of Diabetes or its Complications
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