Pengaruh dark chocolate terhadap kadar NOX serum dan tekanan darah penderita prahipertensi = Effect of dark chocolate on NOX serum level and blood presurre in prehypertension subjects

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Abstrak

Objektif. Penelitian ini bertujuan untuk mengetahui pengaruh pemberian dark chocolate 30 g/hari selama 15 hari berturut-turut terhadap kadar NOx serum dan tekanan darah karyawan administrasi laki-laki dan perempuan penderita prahipertensi.
Metode. Penelitian ini adalah suatu uji klinis paralel. Sebanyak 32 subyek penelitian yang memenuhi kriteria dibagi dalam dua kelompok secara randomisasi blok. Sebanyak 16 orang mendapat dark chocolale 30 g/hari disertai dengan penyuluhan gizi dan 16 orang mendapat white chocolate 25 g/hari disertai dengan penyuluhan gizi. Data yang diambil meliputi usia aktivitas fisik, indeks massa tubuh, asupan energi, natrium, dam polifenol, kadar NOx scrum dan tekanan darah. Pemeriksaan kadar NOx serum dilakukan pra perlakuan (HO) dan pasca perlakuan (H+l6), sedangkan pengukuran tekanan darah dilakukan pra perlakuan (HO), selama perlakuan (I-I+8) dan pasca perlakuan (H+l 6).
Hasil. Asupan polifenol selama perlakuan lebih tinggi pada kelompok perlakuan dibanding kelompok kontrol. Pasca perlakuan, didapatkan perbedaan yang bermakna pada kadar NOx serum antara kelompok P dengan kelompok K (p=0,00l). Tekanan darah pada kedua kelompok mengalami penurunan. Tekanan darah sistolik pasca perlakuan berbeda bermakna antara kelompok P dan kelompok K (p=0,00l), sedangkan tekanan darah diastolik menurun tidak bermakna (p=0,308). Tekanan darah sistolik dan diastolik pra dan pasca perlakuan kelompok P menurun bermakna (p<0,000), sedangkan tekanan darah sistolik dan diastolik pra dan pasca perlakuan pada kelompok K menurun tidak bermakna.
Kesimpulan. Setelah 15 hari perlakuan, terjadi peningkatan asupan polifenol di kelompok perlakuan yang disertai peningkatan kadar NOx serum dan penurunan bermakna tekanan darah sistolik, sedangkan tekanan darah diastolik menurun tidak bermakna.
.....Objective. This study was conducted to investigate the effect of dark chocolate 30 g/day for fifteen day on NOx serum level and blood pressure in male and female administration employee with prehypertension.
Methods. The study was a parallel clinical trial. A total of thirty two subjects who were selected using certain criteria divided into two groups using block randomization. Sixteen subjects received 30 g/day dark chocolate and dietary counseling (Treatment Group) and other 16 subjects received white chocolate 25 g/day and dietary counseling (Control Group) for fifteen days. Data collected in this study consist of age, physical activity, body massa index, intake of energy, sodium, and polyphenol, NOx serum levels and blood pressure. Assessment on NOx serum level were done in pre treatment and after treatment, while blood pressure were assessed in pre treatment, in treatment period and after treatment.
Results. Polyphenol intake in treatment periode in treatment group was significantly higher compared with control groups. After 15 days treatment, NOx scrum level between treatment and control groups was significantly different (p=0,00l). Both group had decreased systolic and diastolic blood pressure. Systolic blood pressure was decreased significantly between groups after treatment (p=0,001), while diastolic blood pressure was not significant (pr0,308). Systolic and diastolic blood pressure pre and after treatment in

ueatment group were significantly decreased, while it was not significant in control group.
Conclusions. There was increased polyphcnol intake in treatment group which increased serum NOx level, significantly decreased systolic blood pressure while no significant decrease in diastolic blood pressure after 15 days treatment.