

Pengaruh kombinasi suplementasi vitamin E dan C terhadap kadar malondialdehida plasma pada usia lanjut dengan hiperkolesterolemia

Rikawati, author

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Abstrak

Penelitian uji klinis paralel, tertutup tunggal, alokasi acak, untuk membandingkan kadar malondialdehida usila 260 tahtm dcngan hiperkolesterolemia yang mendapatkan kombinasi suplementasi vitamin E 400 IU dan vitamin C 500 mg, masing-masing sebutir sehari selama 45 hari dengan kelompok yang mendapat vitamin E 400 IU dan plasebo. Terdapat 42 subyek penelitian yang berasal dari Yayasan Kebagusan, Yayasan Yasni, dan Yayasan Yakin, Pasar Minggu Jakarta Selatan yang dibagi menjadi dua kelompok masing-masing berjumlah 21 orang. Data yang diambil adalah : data demografi, antropometri, data asupan makanan pada minggu pertama, ketiga dan ketujuh, kadar kolesterol LDL dan MDA plasma sebelum dan sesudah perlakuan. Uji statistik yang digunakan adalah uji t-tidak berpasangan bila distribusi normal dan uji Mann-whitney bila distrihusi tidak normal dcngan tingkat kernaaknaan $p < 0.05$.

Sebanyak 20 subyek penelitian dari masing-masing kelompok yang dapat mengikuti penelitian sampai selesai. Sebeltun perlakuan, nilai median kadar kolesterol LDL kelompok vitamin E+plasebo dan vitamin E+C masing- masing adalah 146.50(130-190) mg/dL dan 146.50(131-196) mg/dL. Setelah 45 hari perlakuan, rerata kadar kolesterol LDL kelompok vitamin E+plasebo (151.9:122.1 mg/dl.) meningkat sedangkan kelompok vitamin E+C (146.8:128.21 mg/dL) menurun. Sebelum perlakuan, nilai median kadar MDA plasma kelompok vitamin E+plasebo dan rerata kadar MDA plasma kelompok vitamin E+C masing-musing adalah 2.63(1.92-4.42) nmol/mL dan 3.03=1.62 nmol/mL. Setelah 45 hari perlakuan rerata kadar MDA plasma kedua kelompok mcnurun menjadi 2.30:1.67 nmol/mL ($p < 0.01$) pada kelompok vitamin E+plasebo dan 2.88:1.88 mnol/mL ($p = 0.36$) untuk kelompok vitamin E+C. Penurunan kadar MDA plasma kelompok vitamin E+plasebo lebih besar ($-0.5 = -0.55$ nmol/mL) daripada kelompok vitamin E+C ($-0.28(1.31-1.63)$ nmol/mL), tetapi dengan uji statistik terhadap kedua nilai tersebut, tidak berbeda bermakna ($p = 0.09$). Pemberian kombinasi vitamin E dan vitamin C pada usila dengan hiperkolesterolemia tidak dapat menurunkan kadar MDA plasma lebih besar dibandingkan dcngan hanya pemberian vitamin E. Usia lanjut, hiperkolesterolemia, vitamin E, vitamin C, malondialdehida.

.....The effect of combined supplementation of vitamin E and C on plasma Malondialdehyde level elderly with hypercholesterolemic. To know the effect of combined supplementation of vitamin E and C in lipid peroxidation in hypercholesterolemic elderly. This parallel, single blind, randomization clinical trial purpose was to compare plasma malondialdehyde level in hypercholesterolemic elderly aged more than 60 years old. Forty two people Hom Yayasan Kebagusan, Yayasan Yasni and Yayasan Yakin, Pasar Minggu, South Jakarta which participated the study, were divided into two groups. Twenty one elderly were supplemented with 400 IU vitamin E and 500 mg vitamin C for 45 consecutive days, while the other group was supplemented with 400 IU vitamin E and placebo. The data of demographic, anthropometrics, food intake in the first, third and seventh weeks, plasma LDL and MDA levels before and after period were taken. Statistical analyzes was performed by SPSS 11.5.

Twenty people for each group had followed the study until the end of period. Before study, LDL cholesterol

median for vitamin E + placebo group and vitamin E+C group were 146.50(130-190) mg/dL and 146.50(130-190) mg/dL respectively. After 45 of days treatment, there was an increase in mean LDL cholesterol in vitamin E + placebo group 151.9:1:22.1 mg/dl, while in vitamin E+C group was decreased to 146.8:28.2I mg/dL. Before study, plasma MDA level in vitamin E -I- placebo group and vitamin E+C group were 2.63(1 .92-4.42) and 3.03i0.62 nmol/mL, respectively. Alter 45 days, mean MDA plasma in vitamin E + placebo group was 2.30-£0.67 nmol/mL ($p < 0.01$) and was 2.88:t0.88 nmol/mL ($p = 0.36$) in vitamin E+C group. The decreased on plasma MDA levels in vitamin E^{r*}-placebo group was higher (-0510.55 nmol/mL) than vitamin E+C (-0.28(1.31-1.63) nmol/mL), but statistical test showed not significant different between both group ($p = 0.09$). Combined supplementation vitamin E and vitamin C in hypercholesterolemic elderly couldnot decrease plasma MDA higher than supplementation of vitamin E alone.