Pengaruh pemberian susu bubuk kedelai terhadap kadar malondialdehida perempuan perimenopause dengan hiperkolesterolemia = The effect of soy powder-milk supplementation on malondialdehyde level of hypercholesterolemic perimenopause women

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Abstrak

Penelitian uji klinik dengan one group pre-post test design bertujuan untuk mengetahui pengaruh pemberian susu bubuk kedelai terbadap peroksidasi lipid dengan mengukur kadar MDA. Terdapat 21 subyek perempuan perimenopause deugan hiperkolestero!emia yang memenuhi kriteria penelitian, mengkomsumsi susu bubuk kede!ai setiap hari sebanyak 2x30g selama delapan minggu, Data yang diambil adalah: data demografi, IMT, asupan zat gizi, isoflavon dan emioksidan. Data laboratorium meliputi kadar kolesterol LDL dan MDA serum sebelum dan sesudah empat, delapan minggu perlakuan. Uji statistik yang digunakan adalah uji t-berpasangan blla distribusi normal dan uji Wilcaxon bila distribusi tidak normal dengan tingkat kemaknaan p<0,0:5. Penelitian ini telah mendapat ijin dari Komite Etik FKUI.
Dua subyek drop out, 19 subyek menyelesaikan penetitian; umumnya berlatar belakang pendidikan rendah rerata usia 49,15 tahun dan lMT tergolong berisiko. Asupan kalori subyek penelitian sebelum perlakuan tergolong kurang, tetapi kemudian tergolong cukup setelah perlalkuan. Pola dan asupan harian isollavon subyek penelitian sebelum perlakuan tergolong cukup, meningkat setelah perlakuan. Pola dan asupan harian antioksidan subyek sebelum dan selama masa perlakuan tergolong krang, Rerata kadar kolesterol LDL subyek penelitian sebelum masa perlakuan adalah 134,32 ± 23,70 mg/dl.
Setelah perlakuan menurun, tetapi masih tergolong batas tinggi. Rerala kadar MDA serum subyek penelilian sebelum masa perlakuan adalah 0,82 ± 0,47 nmol/mL. Setelah empat dan delapan minggu masa perlakuan kadar MDA serum meningkat, yaitu masing- masing sebesar 0,98 ± 0,26 umol/ml (p 0,16) dan 1,13 ± 0,40 nmol/ml (p 0,023). Beberapa faktor yang mungkin menjadi penyebab peningkatan tersebut adalah faktor subyek, biomarker MDA, bioaviabilitas dan karakteristik isoflavon serta asupan antioksidan. Bila subyek digolongkan berdasarksn status pre dan pasca menopause, maka setelah minggu IV pedakuan golongan premenopause menunjukkan penurunan kadar MDA yang lebih baik.
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The objective of this study is to investigate the effect of soy powder-milk supplementation on lipid peroxidation which is measured by the level of it's metabolite, malondialdehyde (MDA). Twenty one hypercholesterolentic pre-menopause women who fulfilled the study criteria. started ro consume 2x30g soy powder-milk everyday for eight week. Data taken were: demographic, anthropometric, nutrition intake, isoftavone, antioxidant pattern of isotlavone and antioxidant intake. Whilst laboratory data taken were level of LDL cholesterol and MDA serum before and after four and eight week supplementation. Statistical tests used were paired test if named distribution and Wilcoxon for up normal distribution with significance level of 5%.
Nineteen subjects completed the study. Most subjects had a low educational background, mean age were 49.15 years old and bed BMI classified as "risk." The subjects' calorie intake before supplementation was low, however after the forth and eighth week of supplementation was renegade as sufficient. Subjects'

inkwell pattern and daily intake of isoflavoue were sufficient anti increased during supplementation. outtake pattern anti daily inkwell of antioxidant subjects before and doting supplementation were low. The subjects' mean level of LDL cholesterol before supplementation was 134,32 ± 23,70 mgldl. After four anti eight week supplementation it decrease considerably at 120,79 ± 21,30 and 122,68 ± 20,95 mgldL, which was still categorizeas "high". Subjects' mean level of MDA serum before supplementation was 0,82 ± 0,47 nmoVmL.

After fuur anti eight week of supplementation level of MDA serum was increase consecutively at 0,98 ± 0,26 mnollmL (p = 0,16) and 1,13 ± 0,40 nmollmL (p = 0,023). Several fuctJS that might cause the increase were subjects' age, menopausal status, and BMJ, MDA biomalker, bio availabilily and characteristics of isotlavoue and antioxidant intake. The g100ped of subjects in pre and post-menopause status sbowu different pattern of MDA level which is after four weeks of supplementation the pre-menopause subjects shown reduced of MDA level more than post menopausal subjects.