

Pengaruh suplementasi formula tempe terhadap kadar malondialdehida dan F2-Isoprostan pada penderita hiperkolesterolemia = The effect of tempe formulae supplementation on the level of serum malondialdehyde and F2-Isoprostane of the hypercholesterolemia subjects

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Abstrak

Tujuan: Mengetahui pengaruh suplementasi formula tempo terhadap kadar malondialdehida dan F2-Isoprostan serum pada penderita ipedcolesterolemia

Tempat: P.T. National Gobel, Jakarta

Bahan dan cara:

Penelitian eksperimental pada dua kelompok. Kelompok perlakuan dan kontrol masing-masing 17 subyek yang telah memenuhi kriteria penerimaan dan penolakan diberikan formula tempo (100 gram) per oral, sekali sehari selama 42 hari. Data yang dikumpulkan meliputi data rasio demografi, data nutrisi, data antropometri, data laboratorium, yaitu: malondialdehida (MDA) dan F2-Isoprostan serum.

Hasil : Nilai median MDA serum kelompok perlakuan lebih rendah dibandingkan kelompok kontrol yaitu 0,88 (0,44 - 3,04) nmol/mL vs 1,07(0,39 - 2,02) nmol/mL. Namun uji statistik terhadap perbedaan ini tidak bermakna. Nilai median F2 Isoprostan serum kelompok perlakuan 793,0 (100,9 - 6316,25) pg/mL lebih tinggi dibandingkan nilai median kelompok kontrol 391,75 (100,9 - 10172,5) pg/mL dengan analisis statistik tidak berbeda bermakna. Pada kelompok perlakuan subyek perokok didapatkan korelasi kuat antara kadar MDA dan F2-Isoprostan serum, sedangkan pada kelompok kontrol tidak didapatkan korelasi bermakna.

Keshnpulan: Pengaruh suplementasi formula tempe yang mengandung isofavon terhadap penurunan kadar MDA dan F2-Isoprostan serum belum dapat dibuktikan walaupun terlihat kecenderungan penurunan rentangan kadar MDA serum setelah suplementasi formula tempe selama 42 hari.

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Objective: To identify the effect of tempe formulae supplementation on the level of serum malondialdehyde and F2-Isoprostane of the hypercholesterolemic subjects.

Place: P .T. National Gabel, Jakarta.

Materials and methods:

An experimental study of two groups was carried out 17 subject's of treatment and control group fulfilled the criteria of the selection. The subjects were given 100 gram of tempe formulae orally, once a day for 42 days. The data collected were socio-demographic, nutritional, anthropometric and laboratory data such as: malondialdehyde (MDA) and F2- Isoprostane.

Results: The median value of the serum MDA for the treatment group lower than the control group 0,88(0,44 - 3,04) nmol/mL vs 1,07(0,39 - 2,02) nmol/mL although statistical tests concerning this difference are not significance. The median value of serum F2-Isoprostane was 793,0 (100,9 - 6316,25) pg/mL for the treatment group higher compared to median value of 391,75 (100,9 - 10172,5) pg/mL for the control group. According to statistical analysis this difference was not significant. Subjetcs in the treatment group who were smokers showed a strong correlation between the level of MDA and F2-Isoprostane, whereas the control group did not show any significant correlation.

Conclusion: The effect of tempe formulae supplementation containing isoflavan on lowering the level of serum MDA and F2-Isoprostane have not been proven, although a tendency towards a decrease in the level of serum MDA was observed after 42 days supplementation of tempe formulae.