

Pengaruh pemberian minyak bekatul terhadap profil lipid pada laki laki hiperkolesterolemia ringan-moderat usia 19-55 tahun = Effect of rice bran oil on the lipid profile of mild moderate hypercholesterolemic male aged 19-55 years

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Abstrak

Latar belakang. Individu dewasa di masyarakat menunjukkan perubahan pola makan dan kurang aktivitas sehingga berisiko untuk menderita hiperkolesterolemia dan obesitas. Hiperkolesterolemia dapat diatasi dengan terapi nutrisi. Minyak bekatul mengandung zat aktif yang bekerja secara sinergis dan telah terbukti dari penelitian sebelumnya berperan dalam pengendalian lipid yaitu gamma-oryzanol, fitosterol, dan derivat vitamin E (tokotrienol dan tokoferol). Penelitian ini bertujuan untuk menilai perbaikan profil lipid pada pemberian minyak bekatul dengan jumlah yang berbeda tanpa merubah pola makan subyek.

Metode. Uji klinis, desain paralel, alokasi acak selama 4 minggu pada laki-laki usia 19-55 tahun, kolesterol total 200-300 mg/dl, dan IMT 20-30 kg/m². Subyek diambil secara konsekutif dan dibagi menjadi kelompok 45 ml/hari dan kelompok 15 ml/hari minyak bekatul. Sebelum perlakuan dilakukan wawancara data demografi, aktifitas fisik dan pemeriksaan antropometri. Asupan makan dinilai sebelum dan setelah perlakuan. Pemeriksaan laboratorium profil lipid dilakukan sebelum dan setelah perlakuan 4 minggu.

Hasil. Dari total 20 subyek (10 subyek kelompok 45 ml/hari dan 10 subyek kelompok 15 ml/hari) didapatkan karakteristik yang setara antara kedua kelompok menurut usia, tingkat pendidikan, status gizi, aktivitas fisik, kebiasaan merokok, riwayat hiperkolesterolemia keluarga, antropometri dan profil lipid. Asupan makanan meliputi asupan energi, karbohidrat, protein, lemak dan serat sebelum perlakuan tidak berbeda bermakna antara kelompok. Asupan lemak setelah perlakuan berbeda bermakna antara kedua kelompok dikarenakan perbedaan pemberian jumlah minyak. Setelah perlakuan selama 4 minggu, didapatkan penurunan kolesterol total secara statistik berbeda bermakna antara kedua kelompok ($p=0,049$). Pada kelompok 45 ml/hari kadar kolesterol total turun sebanyak 14% dan pada kelompok 15 ml/hari terjadi penurunan kadar kolesterol total 7,8%. Penurunan LDL dan trigliserida serta peningkatan HDL secara statistik tidak berbeda bermakna antara dua kelompok ($p >0,05$). Pada penelitian ini tidak terjadi perubahan berat badan yang bermakna pada kedua kelompok.

Kesimpulan. Konsumsi minyak bekatul 45 ml/hari menyebabkan perbaikan profil lipid yang lebih baik dibandingkan konsumsi minyak bekatul 15 ml.hari.

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Background. Adult individuals in Indonesian society showed changes in diet pattern and lack of physical activity that increasing risk for hypercholesterolemia and obesity. Hypercholesterolemia would be treated with nutritional therapy. Rice bran oil contains active substances (gamma-oryzanol, phytosterols, and derivatives of vitamin E (tocotrienols and tocopherols) that work in synergy and have been proven on previous research controlling lipid profil. This study aimed to assess the lipid profile improvement in intake of rice bran oil with different amounts without changing the eating patterns of the subjects.

Methods. It was parallel and randomized clinical trial for 4 weeks in male with 19-55 years of age, total cholesterol level 200-300 mg/dl, and BMI of 2030 kg/m². All subjects were recruited consecutively and

classified into two groups that received 45 ml/day or 15 ml/day rice bran oil for 4 weeks. The demographic data interviews, physical activity and anthropometric examination were taken before intervention. Food intake were assessed before and after intervention. Laboratory test of lipid profile performed before and after 4 weeks of treatment.

Results. A total of 20 subjects consisting of 10 subjects with 45 ml/day rice bran oil and 10 subjects with 15 ml/day had obtained similar characteristics in age, education level, nutritional status, physical activity, smoking, family history of hypercholesterolemia, BMI and lipid profiles. Food intake includes intake of energy, carbohydrate, protein, fat and fiber before treatment did not significantly difference between two groups. Fat intake after treatment was significantly different between the two groups due to differences in the amount of oil. After 4 weeks treatment, there was a decrease in total cholesterol significantly different between the two groups ($p = 0,049$). In the group that received 45 ml/ day of rice bran oil total cholesterol level decreased 14% and in the group of 15 ml/day total cholesterol level decreased 7,8%. The reduction of LDL and triglycerides and the increasing of HDL was not significantly different between the two groups ($p >0,05$). In this study, no changes in body weight were significant in both groups.

Conclusion. Rice bran oil consumption 45 ml/day led to improvements in lipid profiles better than consumption 15 ml/day.