

INTISARI

PENGARUH PEMBERIAN *PHYLLANTHUS NIRURI* TERHADAP PERLEMAKAN HATI PADA *RATTUS NORVEGICUS* DENGAN DISLIPIDEMIA

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Latar Belakang: Dislipidemia adalah faktor risiko terjadinya steatosis hati yang dapat berkembang menjadi sirosis hepatis. Terapi simvastatin jangka panjang memiliki berbagai efek samping, terutama miopati, sehingga diperlukan obat alternatif seperti meniran (*P. niruri*). Meniran dipilih karena ditemukan memiliki efek anti-hiperlipidemik dari penelitian sebelumnya sehingga dapat dipertimbangkan sebagai obat alternatif untuk penderita dislipidemia dan perlemakan hati.

Metode Penelitian: Rancangan penelitian *post-test only design with non-equivalent group* digunakan untuk membandingkan perbedaan histopatologi hati *Rattus norvegicus* galur Wistar dengan dislipidemia. Setiap kelompok terdiri dari 7 tikus jantan berusia 15 minggu, dan berat badan 150-220 gram. Tikus dikeluarkan dari penelitian bila mati sebelum penelitian selesai. Kelompok 1 diberi pakan ADII, kelompok 2-5 diinduksi dengan lemak babi 10% + pakan ADII. Kelompok 3 diberi perlakuan simvastatin 0,8mg/200gBB/hari. Kelompok 4 diberi perlakuan ekstrak meniran 50mg/200gBB/hari. Kelompok 5 diberi ekstrak meniran 100mg/200gBB/hari. Induksi berlangsung 62 hari lalu sampel darah diambil untuk mengukur profil lipid (pretest). Induksi dilanjutkan di kelompok 2-5 sambil diberi perlakuan selama 70 hari. Hati tikus kemudian diambil untuk pemeriksaan histopatologis.

Hasil Penelitian: Bila dibandingkan dengan kontrol positif (kelompok 2), persentase steatosis menurun secara signifikan pada kelompok 4 ($p = 0.019$) dan 5 ($p = 0.026$) sementara persentase sel hati normal meningkat secara signifikan pada kelompok 5 ($p = 0.030$).

Kesimpulan: Ekstrak daun meniran 100mg/200gBB/hari kemungkinan dapat memperbaiki steatosis hati.

Kata Kunci: *Phyllanthus niruri*, dislipidemia, *Rattus norvegicus*, perlemakan hati, histopatologi, hati

ABSTRACT

EFFECT OF *PHYLLANTHUS NIRURI* ON HEPATIC STEATOSIS IN DISLIPIDEMIC *RATTUS NORVEGICUS*

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Background: Dyslipidemia is a risk factor for hepatic steatosis which can progress to hepatic cirrhosis. Long-term simvastatin therapy can cause various side effects such as myalgia. Therefore, an alternative therapy such as meniran is needed. Previous researches have shown that it has an anti-hyperlipidemic effect, hence it may be considered as an alternative therapy for patients with dyslipidemia and hepatic steatosis.

Methodology: *Post-test only design with non-equivalent group* was used to compare the difference of liver histopathology in dyslipidemic *Rattus norvegicus* Wistar strain. Each group consisted of 7 male rats aged 15 months and weigh 150-220 gram. Rats were excluded if they died before the research is over. Group 1 was given ADII comfeed, groups 2-5 were induced with lard + ADII comfeed. Group 3 was treated with simvastatin 0,8mg/200gBB/day. Group 4 was treated with meniran extract 50mg/200gBB/day. Group 5 was treated with meniran extract 100mg/200gBB/day. Induction lasted 62 days, then their blood were sampled to measure their lipid profile. The rats were then treated for 70 days. The rats' liver was taken for histopathologic evaluation.

Result: Compared to group 2 (positive control), steatosis percentage decreases significantly in group 4 ($p = 0.019$) and 5 ($p = 0.026$) while normal hepatocyte percentage increases significantly in group 5 ($p = 0.030$).

Conclusion: Meniran extract 100mg/200gBB/day might improve hepatic steatosis.

Keywords: *Phyllanthus niruri*, dyslipidemia, *Rattus norvegicus*, hepatic steatosis, histopathology, liver