

Sri Mulyani

Program Studi Magister Keperawatan Universitas Muhammadiyah Yogyakarta

Ekstrak Daun Belimbing Wuluh (*Averrhoa bilimbi L.*) terhadap Penurunan Tekanan Darah Tikus Putih Jantan (*Rattus Norvegicus*) Hipertensi

INTISARI

Latar Belakang: Hipertensi merupakan faktor risiko koroner yang sangat penting. Hal tersebut terlihat baik di Negara-negara yang telah maju maupun Negara yang sedang berkembang. Belimbing wuluh (*Averrhoa bilimbi L.*) mempunyai kandungan kimia yang bermanfaat bagi kesehatan. Penapisan fitokimia menunjukkan bahwa simplisia daun belimbing wuluh mengandung flavonoid, saponin, tanin dan steroid/triterpenoid. Tanin memiliki efek diuretik selain itu tannin dan flavonoid juga berperan sebagai antioksidan yang berguna untuk menurunkan tekanan darah.

Tujuan: mengetahui ekstrak daun belimbing wuluh terhadap penurunan tekanan darah tikus putih jantan (*Rattus norvegicus*) hipertensi.

Metode: penelitian ini merupakan penelitian eksperimen murni dengan desain *pretest-posttest control group*. Jumlah sampel 21 ekor yang dibagi dalam 3 kelompok yang sebelumnya telah diinduksi dengan NaCl 2.5% dan prednisone dosis 1.5 mg/kg BB selama 15 hari. Kelompok 1 diberikan perlakuan captopril dosis 2.5 mg/kg BB, kelompok 2 diberikan ekstrak daun belimbing wuluh dosis 52.517 mg/100 gram BB tikus dan kelompok 3 diberikan ekstrak daun belimbing wuluh dosis 105.034 mg/100 gram BB tikus. Perlakuan diberikan selama 15 hari setelah itu diukur tekanan darah tikus.

Hasil: captopril dosis 2.5 mg/kg BB efektif terhadap penurunan tekanan darah tikus ($p < 0.05$). Ekstrak daun belimbing wuluh dosis 52.517 mg/100 gram BB tikus efektif terhadap penurunan tekanan darah tikus ($p < 0.05$) dan ekstrak daun belimbing wuluh dosis 105.034 mg/100 gram BB tikus efektif terhadap penurunan tekanan darah tikus ($p < 0.05$).

Kesimpulan: captopril dosis 2.5 mg/kg BB dan ekstrak daun belimbing wuluh dosis 105.034 mg/100 gram BB tikus memiliki efektivitas yang sama terhadap penurunan tekanan darah tikus putih jantan hipertensi.

Kata Kunci: belimbing wuluh, diuretik, antioksidan dan tekanan darah.

Sri Mulyani

Master of Nursing Muhammadiyah University of Yogyakarta

The Starfruit Leaf Extract (Averrhoa bilimbi L.) on Decreased Blood Pressure of Mice (Rattus norvegicus) Hypertention

ABSTRACT

Background: Hypertension is a important risk factor for coronary desease. This happen both in countries that have developed or developing country. Starfruit (*Averrhoa bilimbi L.*) has chemical constituents that are beneficial to health. Phytochemical screening showed that crude drugs starfruit leaves contain flavonoids, saponins, tannins and steroids / triterpenoids. Tanin have a diuretic effect. Tanin and flavonoid in addition also contains antioxidants that can decreased on blood pressure.

Objective: To determine of the starfruit leaf extract to decreased on blood pressure of mice (*Rattus norvegicus*) hypertension.

Methods: This study is a true experimental research design with pretest-posttest control group. Number of samples 21 mice were divided into 3 groups that had previously been induced with 2.5% NaCl and prednisone dose of 1.5 mg / kg BW for 15 days. Group 1 was given captopril treatment dose of 2.5 mg / .kg BW, group 2 was given a dose of starfruit leaf extract 52. 517 mg/100 gram BW and group 3 was given doses of leaf starfruit extract 105. 034 mg/100 gram BW mice. Treatment was given for 15 days and than was measured blood pressure of mice.

Results: captopril dose 2.5 mg / kg BW is effective to decreased on blood pressure of mice ($P < 0.05$). The Starfruit leaf extract dose 52. 517 mg/100 gram BW effective to decreased on blood pressure of mice ($P < 0.05$) and starfruit leaf extract dose 105. 034 mg/100 gram BW effective to decreased on blood pressure of mice ($p < 0.05$).

Conclusion: captopril dose 2.5 mg / kg BW and starfruit leaf extract dose 105. 034 mg/100 gram BW mice had similar effectiveness to decreased on blood pressure of mice hypertention.

Keywords: starfruit, diuretic, antioxidant and blood pressure.