

INTISARI

Latar belakang : Hiperkolesterolemia adalah suatu kondisi dimana kadar kolesterol darah melebihi nilai normal. Riset Kesehatan Dasar (2013) menggambarkan proporsi penduduk ≥ 15 tahun dengan kadar kolesterol total di atas nilai normal adalah 35,9%. Peningkatan kadar kolesterol dalam darah merupakan resiko penyebab terjadinya aterosklerosis yang selanjutnya akan menimbulkan penyakit lain, misalnya kelainan kardiovaskular dan serebrovaskular. Flavonoid adalah salah satu jenis antioksidan yang berperan dalam menurunkan kadar kolesterol darah. Salah satu tanaman yang memiliki kandungan flavonoid adalah tanaman kersen (*Muntingia calabura* L.). Sejauh ini potensi daun kersen sebagai agen penurun kadar kolesterol total darah belum diteliti

Metode : Penelitian ini merupakan jenis penelitian eksperimental laboratories dengan *pre-post test control group design*. Digunakan 30 ekor tikus wistar jantan sebagai hewan uji yang diberikan pakan standar dan induksi hiperkolesterol selama penelitian. Hewan uji dengan kondisi hiperkolesterolemia dibagi menjadi 5 kelompok perlakuan yang selanjutnya diberi perlakuan sesuai kelompok. Pengukuran kadar kolesterol total menggunakan metode enzimatis CHOD-PAP. Data yang diperoleh dianalisis menggunakan uji statistik Shapiro Wilk, Wilcoxon, Levene, Paired Sample T Test, dan One way ANOVA.

Hasil : Kadar kolesterol total sesudah terapi 1 minggu menunjukkan bahwa kelompok simvastatin serta kelompok ekstrak daun kersen mampu menurunkan kadar kolesterol total hewan uji secara bermakna ($p \leq 0.05$). Terdapat perbedaan bermakna antara kadar kolesterol total kelompok simvastatin dan kelompok ekstrak daun kersen ($p = 0.00$). Hasil pengukuran sesudah terapi 2 minggu menunjukkan bahwa kelompok dengan terap simvastatin mampu menurunkan kadar kolesterol total paling banyak, diikuti kelompok ekstrak 400 mg, ekstrak 200 mg, kemudian ekstrak 100 mg. Tidak terdapat perbedaan bermakna antara kadar kolesterol total kelompok simvastatin dan kelompok ekstrak daun kersen 400 mg ($p = 0.09$).

Kesimpulan : Ekstrak ethanol daun kersen (*Muntingia calabura* L.) dapat menurunkan kadar kolesterol total tikus (*Rattus norvegicus*) wistar jantan hiperkolesterolemia secara bermakna ($p < 0.05$). Dosis optimal ekstrak daun kersen (*Muntingia calabura* L.) dalam menurunkan kadar kolesterol total tikus (*Rattus norvegicus*) wistar jantan adalah dosis 400 mg yang diberikan selama 2 minggu.

Kata kunci : kolesterol total, simvastatin, ekstrak daun kersen (*Muntingia calabura* L.)

ABSTRAK

Background: Hypercholesterolemia is a condition in which cholesterol's capacity of blood is more than normal. Riset Kesehatan Dasar (2013) displays the residence's proportion ≥ 15 years old who have higher total cholesterol than normal value is 35,9%. The increasement of cholesterol's capacity in the blood is a cause of aterosklerosis that will raise the other disease, such as the difference of cardiovascular and cerebrovascular. Flavonoid is one of antioksidan that has role to decrease cholesterol's capacity of blood. One of plant that has flavonoid's extract is *kersen* (*Muntingia calabura* L.). The potential of *kersen*'s leaves as an agent of decreasing cholesterol's capacity of blood has been not researched yet.

Method: This research was an experimental laboratories by pre-post test control group design. There were 30 wistar mice manly as animal test that were given standard food and hiperkolesterol induction during the research. The animals test that having hiperkolesterolemia were divided into 5 group of threatment were threaten according to their group. The measurement of total cholesterol's capacity used enzymatic method CHOD-PAP. Then, the data were analyzed by using statistic test of Shapiro Wilk, Wilcoxon, Levene, Paired Sample T Test, and One way ANOVA.

Results: After therapy of total cholesterol's capacity in a week, the result presented that the group of simvastatin therapy and the therapy group of kersens leaves' extract meaningly could decrease total cholesterol's capacity of the animal test ($p \leq 0.05$). There were meaningful diffrence between total cholesterol's capacity of the group of simvastatin therapy and the therapy group of *kersen* leaves' extract ($p = 0.00$). After therapy in two week, the result showed that the most effective group that could decrease total cholesterol's capacity was group of simvastatin therapy, followed by was the group of therapy of extract 400 mg, the group of therapy of extract 200 mg and the group of therapy of extract 100 mg ($p = 0.09$). There was no significant difference between total cholesterol level of the simvastatin group and cherry leaf extract group of 400 mg ($p = 0.09$).

Conclution: Ethanol's extract of *kersen* leaves (*Muntingia calabura* L.) meaningly can decrease total cholesterol's capacity of hypercholesterolemia's wistar mice manly ($p < 0.05$). The optimize dose of *kersen* leaves' extract (*Muntingia calabura* L.) to decrease total cholesterol's capacity of wistar mice manly (*Rattus norvegicus*) is 400 mg that is given in two weeks.

Keywords: total cholesterol, simvastatin, extract of kersen's leaves (*Muntingia calabura* L.).