INTISARI

Batuk merupakan mekanisme pertahanan diri di dalam saluran pernafasan. Antitusif merupakan obat batuk yang berfungsi untuk menekan batuk. Obat-obatan antitusif telah banyak beredar di pasaran, namun efek sampingnya kurang disukai. Sirup OB poliherbal (SOBP) merupakan produk sirup obat batuk yang mengandung ekstrak jahe, kencur, jeruk nipis, daun mint, akar kayu manis, herba thymi, buah biji pala dan madu yang telah dikenal luas sebagai obat batuk tradisional. Penelitian ini bertujuan untuk melihat aktivitas antitusif dari sirup OB poliherbal.

Penelitian dilaksanakan dengan menggunakan hewan uji marmut *(Cavia porcellus)* sebanyak 30 ekor yang diinduksi asam sitrat 7,5%. Hewan uji terbagi dalam 6 kelompok masing-masing kelompok 5 ekor. Kelompok I, kontrol negatif, diberi perlakuan akuades 2 mL. Kelompok II, kelompok perlakuan plasebo 2 mL/kgBB. Kelompok III, kelompok kontrol positif, diberi perlakuan kodein dosis 20 mg/kgBB. Kelompok IV, V dan VI kelompok perlakuan SOBP dengan dosis berturut-turut 1,75; 3,5; dan 7 mL/kgBB. Pada hari ke-0, dilakukan perlakuan induksi asam sitrat 7,5% selama 5 menit tanpa pemejanan agar diperoleh *baseline*. 24 jam berikutnya, dilakukan uji batuk perlakuan. Hewan uji dipejani, kemudian 1 jam setelahnya diinduksi menggunakan asam sitrat 7,5% selama 5 menit. Perlakuan ini dilakukan selama 7 hari berturut-turut. Jumlah batuk teramati selama diinduksi 5 menit asam sitrat 7,5% dicatat. Penekanan batuk (%) diperoleh berdasarkan pengurangan jumlah batuk rata-rata perhari selama 7 hari dibandingkan dengan *baseline* batuk. Persentase penekanan batuk dirata-rata dan hasilnya dianalisis menggunakan uji ANOVA.

Hasil penelitian menunjukkan, SOBP memberikan efek aktivitas antitusif dengan dosis optimal 3,5 mL/kgB ditandai dengan peningkatan signifikan aktivitas antitusif ($p<0,05$) seiring bertambahnya dosis terhadap kelompok kontrol negatif dan plasebo. SOBP dosis 1,75 mL/kgBB; 3,5 mL/kgBB; dan 7 mL/kgBB berturut-turut mampu memberikan penekanan batuk sebesar 30,60% ± 15,49%; 65,98% ± 11,23% ; dan 67,96% ± 22,74%. Hasil dari ketiga kelompok dosis SOBP masih lebih kecil dari kontrol positif kodein yaitu sebesar 83,92% ± 7,58%. Kandungan gingerol dan shogaol dalam ekstrak jahe, eucalyptol dalam kencur, thymol dalam herba thymi dan menthol dalam daun mint diduga mampu memberikan efek antitusif.

Kata kunci: batuk, antitusif, sirup OB poliherbal, asam sitrat.

ABSTRACT

Cough is a defense mechanism in the respiratory tract. Antitussives is a cough medicine that works to suppress cough. Antitussive drugs have been widely circulated in the market, but its side effects are less favored. OB poliherbal syrup (SOBP) is a product of cough syrup containing extract of zingiberis rhizoma, kaempferiae rhizoma, citrus aurantifolii fructus, menthae folia, licorice, thymi herba, myristicae semen and honey that has been widely known as a traditional cough medicine. This study aims to look at the antitussive activity of OB poliherbal syrup.

The experiment was conducted using 30 test animals guinea pig *(Cavia porcellus)* induced by 7.5% citric acid. Test animals are divided into 6 groups with each group contain of 5 animals. Group I, negative control, treated with 2 mL of distilled water. The second group, the placebo group, treated with dose of 2 mL/kg. Group III, the positive control group, treated with codeine dose of 20 mg/kg. Group IV, V and VI were SOBP dose treatment groups respectively, 1.75; 3.5; and 7 mL/kg. On day 0, treatment was performed by inducing 7.5% citric acid for 5 minutes without peroral treatment to obtain baseline cough. 24 hours later, cough test after treatment performed. Test animals were treated via peroral, then 1 hour after that test animals were induced using 7.5% citric acid for 5 minutes. This treatment was carried out for 7 days in a row. The number of cough induced by 7.5% citric acid in 5 minutes was observed and recorded. Cough suppression (%) was obtained by reduction of the number of coughs daily average for 7 days compared to baseline cough. Cough suppression percentage is averaged and the results were analyzed using ANOVA test.

The results showed, SOBP antitussive activity has optimal dose of 3.5 mL /kgBB, marked by a significant increase ($p < 0.05$) of antitussive activity with increasing doses compared with the negative control and placebo group. SOBP dose of 1.75 mL/kg; 3.5 mL/kg; and 7 mL/kg respectively capable of providing cough suppression of 30.60% ± 15.49%; 65.98% ± 11.23%; and 67.96% ± 22.74%. Antitussive activity of all three dose groups SOBP are smaller than the positive control group of codeine, in the amount of 83.92% ± 7.58%. Shogaol and gingerol in zingiberis rhizoma, eucalyptol in kaempferiae rhizoma, thymol in thymi herb and menthol in the mint leaves thougt to be capable of providing antitussive effect.

Keywords: cough, antitussive, OB poliherbal syrup, citric acid.