Hasil pemberian secara subkutan dari kombinasi ekstrak akar pasak bumi (eurycoma longifolia jack) dan klorokuin pada mencit (mus musculus) yang diinfeksi plasmodium berghei = Result of subcutaneous administration of (eurycoma longifolia jack) extract chloroquine combination in mice (mus musculus) infected by plasmodium berghei

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Abstrak

[Resistensi obat antimalaria mendorong pengembangan obat antimalaria baru. Salah satu alternatif pengembangan obat antimalaria adalah mengombinasikan klorokuin dengan komponen lain, contohnya ekstrak akar pasak bumi (Eurycoma longifolia jack.). Berbagai penelitian in vitro maupun in vivo telah membuktikan potensi pasak bumi sebagai antimalaria. Penelitian ini bertujuan untuk mengetahui efek pemberian kombinasi ekstrak akar pasak bumi dan klorokuin secara injeksi subkutan pada mencit (Mus musculus) yang diinfeksi Plasmodium berghei. Perlakuan yang diberikan adalah pemberian ekstrak akar pasak bumi dengan dosis 10 mg/kgBB, 20 mg/kgBB, serta kombinasi ekstrak akar pasak bumi dengan dua dosis tersebut dan klorokuin. Berdasarkan Peters 4-days suppressive test, pertumbuhan parasitemia mencit yang diberikan kombinasi obat memiliki nilai yang mendekati kontrol positif (0,60%), yaitu 0,60% pada dosis kombinasi pasak bumi 10 mg/kgBB dan 0,50% pada dosis 20 mg/kgBB namun analisis statistik menunjukkan perbedaan tersebut tidak bermakna (p>0,05). Hasil penghitungan penghambatan pertumbuhan parasit menunjukkan kecenderungan yang sama. Penghambatan pertumbuhan parasit kontrol positif menunjukkan angka 97,9% sementara pemberian kombinasi obat menunjukkan angka 97,7% (dosis pasak bumi10 mg/kgBB) dan 98,2% (dosis pasak bumi 20 mg/kgBB). Hal ini menunjukkan bahwa tidak ada perbedaan bermakna antara efek pemberian kombinasi ekstrak akar pasak bumi dan klorokuin secara injeksi subkutan dibandingkan dengan terapi klorokuin saja;Antimalarial drug resisstance demand us to develop new antimalarial drug. One of the alternative is combining chloroquine with new compund, for example pasak bumi root extract (Eurycoma longifolia jack). Many studies have shown the potency of pasak bumi root extract as a antimalarial drug. This study is aim to investigate the effect of combination of pasak bumi root extract and chloroquine which is administrated by subcoutaneous injection to Plasmodium berghei-infected mice. Mice were given pasak bumi root extract only with 10 mg/kgBW and 20 mg/kgBW dose , also combination therapy of pasak bumi root extract on same dose and choloquine. Based on Peters 4-days suppressive test, parasite growth in mice with combination therapy was nearing the postive control value (0.60%), 0.60% for 10 mg/kgBW dose and 0.50% for 20 mg/kgBW dose. However, the statistic analysis showed the difference was not significant (p>0.05). Growth inhibition counting showed the same trend. Positive control growth inhibiton value is 97.9% meanwhile the combination therapy group has 97.7% for 10 mg/kgBW dose and 98.2% for 20 mg/kgBW dose. The study suggests that there were no significat difference between the effect of subcutaneously administrated combination of pasak bumi extract root-chloroquine and chloroquine only therapy., Antimalarial drug resisstance demand us to develop new antimalarial drug. One of the alternative is combining chloroquine with new compund, for example pasak bumi root extract (Eurycoma longifolia jack). Many studies have shown the potency of pasak bumi root extract as a antimalarial drug. This study is aim to investigate the effect of combination of pasak bumi root

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