

Uji aktivitas antitrombotik kombinasi ekstrak jahe (*Zingiber officinale rosc.*) dan kayu secang (*Caesalpinia sappan L*) secara in vivo = In vivo antithrombotic activity test of ginger (*Zingiber officinale rosc*) and sappan wood (*Caesalpinia sappan L*) extract combination

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Abstrak

ABSTRAK

Penelitian secara in vitro telah membuktikan jahe (*Zingiber officinale Rosc.*) dan kayu secang (*Caesalpinia sappan L.*) memiliki aktivitas antitrombotik. Penelitian ini bertujuan untuk menguji khasiat kombinasi kedua tanaman tersebut secara in vivo dengan parameter waktu perdarahan (bleeding time) dan angka harapan hidup (survival rate). Enam puluh enam (66) ekor mencit dibagi ke dalam dua percobaan (bleeding time dan survival rate). Kelompok perlakuan terdiri dari kontrol normal (CMC), kontrol negatif (CMC), kontrol positif (Aspirin), kelompok kombinasi ekstrak dosis 1, 2, dan 3. Bahan tersebut diberikan secara oral selama 7 hari. Pada kelompok percobaan bleeding time, dilakukan pengamatan bleeding time pada ekor mencit yang telah dipotong. Untuk kelompok percobaan survival rate, dilakukan induksi trombosis menggunakan kolagen + epinefrin secara intravena, lalu dilakukan perhitungan survival rate. Hasil pada kelompok dosis 2 yang diberi ekstrak jahe + secang dengan dosis 56 mg : 14 mg/20 g BB menunjukkan peningkatan bleeding time yang bermakna ($p < 0,05$) dibandingkan dengan kontrol normal. Kelompok dosis 2 juga memiliki survival rate lebih tinggi dari kontrol negatif. Berdasarkan hasil tersebut dapat disimpulkan bahwa ekstrak jahe + secang pada dosis 56 mg : 14 mg/20 g BB berpotensi sebagai antitrombotik karena mampu meningkatkan bleeding time dan survival rate.

ABSTRACT

In vitro studies have proven that ginger (*Zingiber officinale Rosc.*) And sappan wood (*Caesalpinia sappan L.*) have antithrombotic activity. This study aimed to prove efficacy of the combination of both these plants by doing in vivo antithrombotic activity test with bleeding time and survival rate as the parameters. Sixty-six (66) mice were divided into two experimental groups (bleeding time and survival rate). The treatment groups consisted of normal control (CMC), negative control (CMC), positive control (Aspirin), extract groups divided into dose 1, 2, and 3. All substances were administered orally for 7 days. For the experimental groups of bleeding time, bleeding time was observed on mice tail that had been cut. For the experimental groups of survival rate, trombosis induction was done by injecting collagen + epinephrine intravenously, then calculation of survival rate was performed. Results showed that bleeding time of mice in dose 2 group that was given ginger + sappan extract at dose 56 mg : 14 mg/20 g BW increased significantly ($p < 0,05$) compared with the normal control. Dose 2 group also has survival rate which is higher than the negative control. Based on these results, it can be concluded that the combination of ginger + sappan extract at dose 56 mg : 14 mg/20 g has a potential as antithrombotic drugs because it can increase bleeding time and survival rate;