INTISARI

Akar tanaman akar kuning (*Fibraurea chloroleuca*, Miers) digunakan untuk mengobati hepatitis, kencing manis, disentri, dan sebagai tonikum setelah bersalin. Tujuan dari penelitian ini untuk mengetahui ketoksikan akut, mekanisme kematian, dan spektum efek toksik pada mencit jantan setelah pemejanan rebusan akar tanaman akar kuning.

Penelitian ini termasuk penelitian eksperimental murni yang dirancang mengikuti rancangan acak lengkap pola searah. Lima puluh ekor mencit jantan (galur Swiss, umur 60-75 hari, berat badan 20-25 gram), dibagi secara acak menjadi 5 kelompok sama banyak (10 ekor). Kelompok I sebagai kelompok kontrol yang diberi aquadest dengan dosis 25 g/kgBB, kelompok II-V diberi perlakuan rebusan akar tanaman akar kuning dengan dosis 1092 mg/kgBB, 2730 mg/kgBB, 6825 mg/kgBB, dan 17062,5 mg/kgBB. Perlakuan tersebut diberikan secara oral, sekali pada hari pertama dan dilakukan pengamatan secara intensif pada tiga jam pertama selama 24 jam dan diteruskan selama 14 hari. Pengamatan secara kuantitatif berdasarkan pada perubahan berat badan dan jumlah kematian mencit jantan pada masing-masing kelompok selama 14 hari. Pengamatan secara kualitatif meliputi gejala-gejala toksik dan pemeriksaan histopatologi. Pada hari ke-14, mencit jantan dikorbankan untuk diambil organ-organ vitalnya (jantung, lien, lambung, usus, ginjal, hati, dan paru).

Hasil penelitian menunjukkan bahwa harga LD_{50} pemberian rebusan akar tanaman akar kuning pada mencit jantan adalah > 17062.5 mg/kgBB. Dosis ini merupakan LD_{50} semu, maka ketoksikan akut rebusan akar tanaman akar kuning termasuk dalam kategori praktis tidak toksik (> 15 g/kg). Gejala toksik yang teramati pada dosis 1092 mg/kg BB dan 2730 mg/kgBB yaitu aktivitas lokomotor naik, sensitivitas terhadap sentuhan naik, dan penjilatan naik. Selain itu pada dosis 6825 mg/kgBB dan 17062,5 mg/kg BB menunjukkan gejala toksik berupa dispnea. Pada pemeriksaan histopatologi ditunjukkan adanya perubahan pada organ lambung, usus, ginjal, hati, dan paru. Mekanisme yang memperantarai kematian mencit jantan tidak dapat ditentukan dengan pasti karena tidak ada mencit jantan yang mati. Kemungkinan mencit jantan mati karena mengalami dispnea.

ABSTRACT

The *Fibraurea chloroleuca*, Miers (locally named as root of yellow root plants) is used as antihepatitis, antidiabetes, antidysentery, and as tonic after childbirth. The purposes of this study are to know acute toxicity, death mechanism, and spectrum of toxic effects on male mice after given with the water extract root of yellow root plants.

The experimental study was done according to completely randomized design. Fifty male mice, Switzerland strain, 20-25 g weight, and 60-75 day age, were used as test animals. They were divided into five groups, each group contains ten male mice. Group I was the negative control received aquadest 25 g/kgBW and group II to V, treatment groups, were given with the water extract root of yellow root plants at the dose of 1092, 2730, 6825, and 17062.5 mg/kgBW. The water extract single dose orally on the first day. The observation on male mice was done intensively during the early 3 hours and continued for 14 days.

The quantitative test consisted of the change of body weight and number of death male mice within 14 days. The qualitative test in this study included toxic symptoms and histopathology observation. The important organ such as cor, lien, gastrium, intestine, renal, hepar, and lung were taken from death male mice. After 14 days, the survival male mice were sacrified to observe the histopathology of important organ.

The result showed that LD_{50} of the root of yellow root plants water extract on male mice is > 17062.5 mg/kgBW. This dose is pseudo LD_{50}, and the acute toxicity is categorized practically non-toxic (> 15 g/kg). The toxic symptoms were occurred at group II and III i.e.: the increased locomotor activity, sensitivity against touching, and pahm-licking frequency. The additional toxic symptom of dyspnea was observed in group IV and V. The histopathology observation was found that there was change of gastrium, intestine, renal, hepar, and lung appearance. The exact death mechanism can not determined because of no male mice death. The possible mechanism is caused by dyspnea.