

ABSTRAK

EFEK TOKSIK EKSTRAK ETANOL 96% BIJI JENKOL (*Pithecollobium lobatum benth*) TERHADAP GAMBARAN HISTOPATOLOGI HEPAR dan KADAR SGPT (*Serum Glutamic Pyruvate Transaminase*) serta SGOT (*Serum Glutamic Oxaloacetic Transaminase*) TIKUS PUTIH (*Rattus norvegicus*) JANTAN GALUR SPRAGUE DAWLEY

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Latar Belakang. Di Indonesia banyak tumbuhan yang digunakan sebagai obat herbal salah satu diantaranya adalah biji jengkol. Jengkol diduga memiliki efek samping yang buruk terhadap organ tubuh, salah satunya adalah hepar. Untuk mendiagnosis adanya kerusakan sel hepar, dilakukanlah pemeriksaan histopatologi hepar serta pemeriksaan enzim SGPT serta SGOT. Tujuan dari penelitian ini adalah untuk mengetahui efek toksik ekstrak etanol 96% biji jengkol terhadap gambaran histopatologi hepar dan kadar enzim SGPT serta SGOT.

Metode. Penelitian ini adalah penelitian eksperimental dengan rancangan *Post Test Only Control Group Design*. Sampel dalam penelitian ini adalah tikus putih (*Rattus norvegicus*) jantan galur *Sprague Dawley*, berjumlah 20 ekor yang dibagi menjadi 4 kelompok, yaitu kelompok kontrol negatif (diberikan aquades), perlakuan 1 (diberikan dosis ekstrak jengkol 1200 mg/kgBB), perlakuan 2 (diberikan dosis ekstrak jengkol 2400 mg/kgBB), perlakuan 3 (diberikan dosis ekstrak jengkol 4800 mg/kgBB) selama 14 hari. Kemudian dilakukan pengambilan darah tikus dengan teknik pungsi transkardial untuk dilakukan pemeriksaan kadar enzim SGPT dan SGOT, serta dilakukan pembedahan untuk pengambilan organ hepar yang akan digunakan untuk pemeriksaan histopatologi.

Hasil. Berdasarkan hasil uji *Oneway ANOVA*, diperoleh nilai $p=0,001$ terhadap gambaran histopatologi hepar tikus, sedangkan terhadap kadar SGPT dan SGOT, diperoleh nilai $p=0,001$ dan $p=0,001$. Hal ini menyatakan bahwa pemberian ekstrak etanol biji jengkol berpengaruh terhadap gambaran histopatologi, SGPT, dan SGOT. Dosis 1200 mg/kgBB, 2400 mg/kgBB, dan 4800 mg/kgBB berpengaruh terhadap kerusakan histopatologi hepar dan kadar SGPT, sedangkan pada SGOT hanya dosis 2400 mg/kgBB dan 4800 mg/kgBB yang memiliki pengaruh.

Kesimpulan. Terdapat efek toksik pemberian ekstrak etanol 96% biji jengkol terhadap gambaran histopatologi hepar dan kadar enzim SGPT serta SGOT.

Kata Kunci: Hepar, Histopatologi, Jengkol, SGOT, SGPT

ABSTRACT

THE TOXIC EFFECTS OF ETHANOL EXTRACT 96% (*Pithecollobium lobatum benth*) TOWARD HISTOPATHOLOGY LIVER and SGPT (*Serum Glutamic Pyruvate Transaminase*) also SGOT (*Serum Glutamic Oxaloacetic Transaminase*) LEVEL OF MALE WHITE RAT (*Rattus norvegicus*) SPRAGUE DAWLEY STRAIN

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Background. In Indonesia, there are many plants used as herbal remedies, one of which is *Pithecollobium lobatum benth*. However, there was an assumption that *Pithecollobium lobatum benth* also have bad side effects to the body's organs, one of which is the liver. In order to diagnose the damage of liver cells, histopathological examination of the liver and test of SGPT and SGOT enzymes is needed. The objective of this research is to know the toxic effects of 96% ethanol extract of *Pithecollobium lobatum benth* toward liver histopathology overview and levels of SGPT and SGOT enzymes.

Method. This study is an experimental research with Post Test Only Control Group Design. The sample in this study was a male white rat (*Rattus norvegicus*) Sprague Dawley strain, there are 20 rats that were divided into 4 groups, there are the negative control group, treatment 1 (given doses of extract *Pithecollobium* 1200 mg/kg), treatment 2 (given doses of extract *Pithecollobium* 2400 mg/kg), treatment 3 (given doses of extract *Pithecollobium* 4800 mg/kg) for 14 days. The rats' blood was taken from transcardial puncture to examine the SGPT and SGOT enzymes levels, after that the surgery was needed to take liver organ for histopathological examination.

Results. Based on the test results one way ANOVA, the result showed the value of $p=0.001$ for rat hepatic histopathology, whereas the levels of SGPT and SGOT, the result showed the value of $p=0.001$ and $p=0.001$. It is claimed that the 96% ethanol extract *Pithecollobium lobatum benth* have the toxic effects with histopathology liver, SGPT, and SGOT. The doses of 1200 mg/kgBB, 2400 mg/kgBB, and 4800 mg/kgBB affect the liver histopathological damage and SGPT, whereas doses of 2400 mg/kgBB and 4800 mg/kgBB in SGOT of Sprague Dawley rats.

Conclusion. There is the toxic effects 96% ethanol extract of *Pithecollobium lobatum benth* on liver histopathology and levels of SGPT also SGOT enzymes.

Keywords: Histopathology, Liver, *Pithecollobium lobatum benth*, SGOT, SGPT