

**PERBEDAAN PENGARUH PEMBERIAN PARASETAMOL OVERDOSIS
TERHADAP GAMBARAN HISTOPATOLOGI HEPAR TIKUS (*Rattus
novergicus*) GALUR WISTAR**



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THE DIFFERENT EFFECT OF PARACETAMOL OVERDOSE TO LIVER HISTOPATHOLOGY APPEARANCE OF RAT (*Rattus novergicus*) WISTAR STRAIN

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ABSTRACT

Paracetamol is one of antipyretics and analgesics that is widely used around the world. Consumption exceeding the therapeutic dose of paracetamol can cause liver damage. This study aims to observe the different effect of paracetamol overdose to the liver histopathology appearance of rat (*Rattus novergicus*) Wistar strain. This study was an experimental study with *post test only control group design* conducted at the Laboratory of Pharmacology Faculty of Pharmacy, University of Andalas, Laboratory of Pathology Faculty of Medicine, University of Andalas and Histology Laboratory of the Faculty of Medicine.

This study used 28 rats strain Wistar were divided into four groups: control group, the treatment group 1, 2, and 3. The control group rats were not given paracetamol. The control group 1 was given paracetamol 4 grams, the treatment group 2 were given 6 grams of paracetamol, and the treatment group 3 were given 10 grams of paracetamol. The dose is converted (conversion factor is 0,018) and given during one day divided into three feedings. On the seventh day after treatment the rats were dissected and taken their livers. Histopathology of rats livers were observed by *Manja Roenigk* scoring. *Kruskal-Wallis* test of liver damage score in all groups are obtained significance value of $p < 0.05$ ($p = 0.000$). It is concluded that there are significant differences in liver histopathology appearance of rats (*Rattus novergicus*) Wistar strain that were given paracetamol 4 grams, 6 grams and 10 grams.

Keywords: hepatotoxic, antipyretic, *Manja Roenigk*, hepatocytes degeneration

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ABSTRAK

Parasetamol adalah salah satu antipiretik dan analgetik yang banyak digunakan di seluruh dunia. Konsumsi parasetamol melebihi dosis terapeutik dapat menimbulkan kerusakan pada hepar. Penelitian ini bertujuan untuk melihat perbedaan pengaruh pemberian parasetamol overdosis terhadap gambaran histopatologi hepar tikus (*Rattus novergicus*) galur Wistar. Penelitian eksperimental dengan desain *post test only control group design* dilaksanakan di Laboratorium Farmakologi Fakultas Farmasi Universitas Andalas, Laboratorium Patologi Anatomi Fakultas Kedokteran Universitas Andalas dan Laboratorium Histologi Fakultas Kedokteran.

Penelitian menggunakan 28 ekor tikus wistar yang dibagi dalam empat kelompok yaitu kelompok kontrol (tanpa parasetamol), kelompok perlakuan 1 (parasetamol 4 gram), kelompok perlakuan 2 (parasetamol 6 gram), dan kelompok perlakuan 3 (parasetamol 10 gram). Dosis tersebut dikonversi (faktor konversi 0,018) dan diberikan selama satu hari dibagi dalam tiga kali pemberian. Pada hari ketujuh setelah perlakuan tikus dibedah dan diambil heparnya. Histopatologi hepar tikus diamati menggunakan skoring *Manja Roenigk*. Uji *Kruskal-Wallis* terhadap skor kerusakan hepar pada semua kelompok didapatkan nilai kemaknaan $p < 0,05$ ($p = 0,000$). Kesimpulan penelitian ini adalah terdapat perbedaan bermakna gambaran histopatologi hepar tikus (*Rattus novergicus*) galur wistar yang diberi parasetamol 4 gram, 6 gram dan 10 gram.

Kata kunci: hepatotoksik, antipiretik, *Manja Roenigk*, degenerasi hepatosit