

Pengaruh pemberian ekstrak lunasin dari biji kedelai terhadap Luas Vena Sentralis Hati Tikus = Effect of administration of lunasin extract from soybean seeds on Central Vein Area of Rat Liver

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Abstrak

Latar belakang: Dalam dua dekade terakhir, insidensi terjadinya Herb-Induced Liver Injury (HILI) terus meningkat di seluruh dunia karena terdapat banyak produk herbal yang belum melalui uji keamanan yang baik. Saat ini, salah satu produk herbal yang banyak dikonsumsi adalah lunasin. Namun, belum banyak uji toksisitas yang dilakukan terhadap senyawa tersebut. Penelitian ini bertujuan untuk melihat pengaruh pemberian lunasin terhadap luas vena sentralis hati sebagai salah satu indikator toksisitas hati. Metode: 42 ekor tikus Sprague-Dawley (SD) dibagi ke dalam empat kelompok perlakuan: kelompok normal, lunasin dosis 250 mg/kgBB, 500 mg/kgBB, dan 750 mg/kgBB. Setelah diberi perlakuan selama 90 hari, jaringan hati hewan uji diambil dan dijadikan preparat histopatologi. Pengukuran luas vena sentralis hati dilakukan menggunakan perangkat lunak Indomicro View.

Hasil: Luas vena sentralis hati pada kelompok lunasin dosis 250 mg/kgBB ($3,82 \pm 1,8 \times 10^3 \text{ m}^2$), 500 mg/kgBB ($3,35 \pm 1,34 \times 10^3 \text{ m}^2$), dan 750 mg/kgBB ($2,12 \pm 0,93 \times 10^3 \text{ m}^2$) tidak memiliki perbedaan yang signifikan terhadap kelompok normal ($2,52 \pm 0,66 \times 10^3 \text{ m}^2$) ($p > 0,05$). Perbedaan signifikan hanya ditemukan antara kelompok dosis 250 dan 750 mg/kgBB ($p = 0,02$).

Kesimpulan: Lunasin dalam dosis 250 mg/kgBB, 500 mg/kgBB, dan 750 mg/kgBB tidak menyebabkan perubahan luas vena sentralis yang signifikan terhadap kelompok normal.

.....Introduction: In the last two decades, the incidence of Herb-Induced Liver Injury (HILI) continues to increase worldwide because many herbal products have not been tested thoroughly for their safety.

Currently, a herbal product called lunasin is widely consumed. However, not many toxicity tests have been carried out on them. This study aimed to examine the effect of lunasin administration on the hepatic central vein area as one of the indicators of hepatotoxicity.

Method: 42 Sprague-Dawley (SD) rats were divided into four treatment groups: normal group, lunasin dose of 250 mg/kgBW, 500 mg/kgBW and 750 mg/kgBW. After 90 days of treatment, the rats' liver tissues were made into histopathological preparations. Measurement of the hepatic central vein area was performed using the Indomicro View software.

Result: The hepatic central vein area in the lunasin group at a dose of 250 mg/kgBW ($3.82 \pm 1.8 \times 10^3 \text{ m}^2$), 500 mg/kgBW ($3.35 \pm 1.34 \times 10^3 \text{ m}^2$), and 750 mg/kgBW ($2.12 \pm 0.93 \times 10^3 \text{ m}^2$) did not have a significant difference to the normal group ($2.52 \pm 0.66 \times 10^3 \text{ m}^2$) ($p > 0.05$). A significant difference was only found between the 250 and 750 mg/kgBW dose groups ($p = 0.02$).

Conclusion: Lunasin in doses of 250 mg/kgBW, 500 mg/kgBW, and 750 mg/kgBW did not cause significant changes in the central venous area of the liver.