GAMBARAN HISTOPATOLOGI HEPAR TIKUS PUTIH *(Rattus norvegicus)* GALUR SPRAGUE DAWLEY MODEL HIPERURISEMIA DENGAN *NON ALCOHOLIC FATTY LIVER DISEASE* YANG DIBERI BAWANG HITAM

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ABSTRAK

Latar Belakang: Kondisi hiperurisemia dapat menyebabkan kerusakan gambaran histopatologi hepar, seperti terbentuknya steatosis, fokus inflamasi, serta *ballooning* hepatosit. Bawang hitam merupakan alternatif pengobatan hiperurisemia. Selain itu, bawang hitam juga bersifat antiinflamasi dan antioksidan karena mengandung senyawa *S-allyl-L-cysteine* (SAC) serta flavonoid. **Tujuan :** Penelitian ini bertujuan mengetahui efek pemberian bawang hitam terhadap gambaran histopatologi hepar tikus putih model hiperurisemia. **Metode :** Penelitian ini merupakan penelitian observasional analitik terhadap bahan biologis tersimpan (BBT). Terdapat tiga puluh hewan coba dibagi menjadi lima kelompok perlakuan. Kelompok A adalah kontrol hiperurisemia, kelompok B dengan obat standar, kelompok C, D, E kelompok perlakuan larutan bawang hitam dengan dosis berturut-turut 240, 480, 960 mg/hari selama 14 hari. BBT disimpan dalam larutan NBF 10% selama satu tahun, dibuat preparat *Hematoxylin-Eosin* (HE), dan diamati. **Hasil :** Rerata skor gambaran histopatologi hepar kelompok A, B, C, D, E berturut-turut 1,33±0; 0,77±0,157; 0,83±0,167; 0,83±0,167; 0,44±0,157. Hasil uji hipotesis *Kruskal Wallis* terdapat perbedaan signifikan ($p<0,05$). Hasil uji *post-hoc Mann-Whitney U* menunjukkan perbedaan paling signifikan ($p<0,05$) adalah antara kelompok A dengan kelompok B, C, D, dan E. **Kesimpulan :** Pemberian larutan bawang hitam dapat memperbaiki gambaran histopatologi hepar tikus putih model hiperurisemia dengan dosis terbaik 960 mg/hari selama 14 hari.

Kata Kunci: Bawang Hitam, NAFLD, Hiperurisemia, Tikus Putih.

HISTOPATHOLOGICAL DESCRIPTION OF LIVER IN WHITE RATS (Rattus norvegicus) OF THE SPRAGUE DAWLEY STRAIN IN A HYPERURICEMIA MODEL TREATED WITH BLACK GARLIC

Study of Histopathology in Stored Biological Specimens from White Rats

ABSTRACT

Background: *Hyperuricemia conditions can cause damage to the histopathological condition of the liver, such as the formation of steatosis, inflammatory foci, and ballooning hepatocytes. Black garlic is an alternative treatment for hyperuricemia. In addition, black onions are also anti-inflammatory and antioxidant because they contain S-allyl-L-cysteine (SAC) and flavonoid compounds.* ***Objective:*** *This study aims to determine the effect of black garlic administration on the hepatic histopathology picture of white rat hyperuricemia model.* ***Methods:*** *This study is an analytical observational study of Biological Material Preserved (BMP). There were thirty experimental animals divided into five treatment groups. Group A served as hyperuricemia control, group B received the standard drugs, group C, D, E groups were treated with black garlic solution at doses of 240, 480, 960 mg/day for 14 days respectively. BMP was stored in 10% NBF solution for one year, Hematoxylin-Eosin (HE) preparations were made, and observed.* ***Results:*** *The mean score of hepatic histopathology images of group A, B, C, D, E were 1.33±0; 0.77±0.157; 0.83±0.167; 0.83±0.167; 0.44±0.157 respectively. The results of the Kruskal Wallis hypothesis test showed significant differences ($p<0.05$). The results of the Mann-Whitney U post-hoc test showed the most significant difference ($p<0.05$) was between group A with groups B, C, D, and E.* ***Conclusion:*** *The administration of black garlic solution can improve the histopathology picture of white rat hepatic hyperuricemia model with the best dose of 960 mg/day for 14 days.*

Keywords: Black Garlic, NAFLD, Hyperuricemia, White Rat.