ABSTRAK

Judul	: Pengaruh *Snakehead fish* Terhadap Kadar Superoxyde Dysmutase (SOD) Dan Gambaran Histopatologi Lambung Tikus Model Sirosis Hati
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Sirosis hati adalah penyakit kronis yang sering menimbulkan komplikasi serius berupa gastropati hipertensi portal (GHP). Kondisi ini ditandai dengan peningkatan stres oksidatif serta berkurangnya aktivitas enzim pertahanan tubuh seperti *Superoxide Dismutase* (SOD). *Snake head fish* (Channa striata) mengandung albumin serta asam amino dalam jumlah tinggi, yang berfungsi sebagai antioksidan sekaligus memiliki efek antiinflamasi. Tujuan penelitian ini dilakukan untuk mengetahui perbedaan kadar SOD dan gambaran histopatologi lambung pada tikus model sirosis hati yang diberikan ekstrak *Snakehead fish* dengan berbagai dosis. Penelitian ini merupakan studi eksperimental dengan rancangan randomized post-test only control group design menggunakan 30 ekor tikus Wistar jantan. Seluruh hewan uji dibagi ke dalam lima kelompok, yaitu kelompok kontrol normal (K1), kelompok sirosis (K2) yang diinduksi karbon tetraklorida (CCl4), serta tiga kelompok sirosis lain yang masing-masing diberikan ekstrak *Snake head fish* secara oral dengan dosis 100 mg/kgBB (K3), 150 mg/kgBB (K4), dan 200 mg/kgBB (K5). Pengukuran kadar SOD dilakukan dengan homogenisasi jaringan dan gambaran histopatologi lambung diperiksa menggunakan pewarnaan Hematoksilin-Eosin. Analisis statistik menggunakan uji One-Way ANOVA atau uji Kruskal-Wallis. Pemberian ekstrak *Snake head fish* meningkatkan kadar SOD lambung secara dosis-respons ($p < 0.001$). Dijumpai perbaikan histopatologi lambung dengan lesi minimal secara dosis-respons ($p > 0.05$) secara bertahap. Temuan penelitian ini

membuktikan bahwa ekstrak *Snake head fish* dapat meningkatkan kadar SOD dan perbaikan histopatologi lambung tikus model sirosis hati.

Kata Kunci: S Sirosis Hati, *Snakehead fish*, Gastropati Hipertensi Portal, *Superoxide Dismutase*

ABSTRACT

Title : *The Effect of Snakehead Fish on Superoxide Dismutase (SOD) Levels and Gastric Histopathological Features in a Rat Model of Liver Cirrhosis Elderly People in Nursing Homes*

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Liver cirrhosis is a chronic disease that often leads to serious complications such as portal hypertensive gastropathy (PHG). This condition is characterized by increased oxidative stress and reduced activity of endogenous defense enzymes such as Superoxide Dismutase (SOD). Snakehead fish (Channa striata) contains high levels of albumin and amino acids, which function as antioxidants and possess anti-inflammatory effects. This study aimed to determine the differences in SOD levels and gastric histopathological features in a rat model of liver cirrhosis treated with various doses of snakehead fish extract. The research employed an experimental design using a randomized post-test only control group design involving 30 male Wistar rats. All subjects were divided into five groups: a normal control group (K1), a cirrhosis group (K2) induced with carbon tetrachloride (CCl_4), and three cirrhosis groups treated orally with snakehead fish extract at doses of 100 mg/kgBW (K3), 150 mg/kgBW (K4), and 200 mg/kgBW (K5). SOD levels were measured using tissue homogenization, while gastric histopathological features were examined using Hematoxylin-Eosin staining. Statistical analysis was performed using the One-Way ANOVA test or the Kruskal-Wallis test. Administration of snakehead fish extract increased gastric SOD levels in a dose-dependent manner ($p < 0.001$). Histopathological examination also revealed gradual improvement in gastric tissue with minimal lesions in a dose-dependent pattern ($p > 0.05$). These findings demonstrate that snakehead fish extract can enhance SOD levels and improve gastric histopathology in a rat model of liver cirrhosis.

Keywords: Liver Cirrhosis, Snakehead Fish, Portal Hypertensive Gastropathy, Superoxide Dismutase