

**PENGARUH DIAZEPAM TERHADAP STRUKTUR HISTOLOGIS
HEPAR DAN DUODENUM TIKUS PUTIH
(*Rattus norvegicus*, Berkenhout 1769)**

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Penyalahgunaan obat dan senyawa kimia dewasa ini semakin meningkat, kasus narkoba yang ditemukan dikalangan masyarakat semakin memprihatinkan. Salah satu obat tidur yang tergolong NAPZA dan beredar di masyarakat adalah Diazepam. Diazepam merupakan obat golongan benzodiazepine yang merupakan narkoba golongan psikotropika IV. Diazepam di absorpsi oleh duodenum dan di metabolisir oleh hepar. Tujuan penelitian ini adalah untuk mengetahui perubahan struktur histologis hepar dan duodenum serta perubahan enzim SGPT dan SGOT hepar akibat diazepam. Penelitian ini menggunakan 12 tikus yang dibagi menjadi 4 kelompok, yaitu kontrol (Polyethylen Glicol 1000 1%) dan 3 perlakuan diazepam (P1, P2 dan P3) masing-masing dengan konsentrasi 62,25; 83; 124,5 mg/kg/BB. Perlakuan diberikan selama 28 hari. Kadar SGPT dan SGOT diukur pada hari ke-0, 7, 14, 21 dan 28 setelah itu dianalisis dengan *one way* anova T-Test. Setelah 28 hari tikus di euthanasia dan di nekropsi hepar dan duodenum. Preparat dibuat dengan metode parafin dan pewarnaan hematoksilin eosin. Struktur histologis diamati menggunakan mikroskop dan dilakukan skoring. Terjadi kerusakan histologis hepar pada perlakuan diazepam dibandingkan kontrol. Kerusakan struktur histologis hepar yang teramati adalah vakuolisasi, piknosis, dilatasi sinusoid, *cloudy swelling*, perlemakan dan akumulasi sel Kupffer. Kerusakan struktur histologis duodenum yang terlihat adalah dilatasi glandula, edema, piknosis, kongesti, erosi epitel dan infiltrasi neutrofil. Kerusakan meningkat seiring peningkatan dosis. Analisis enzim SGPT dan SGOT memperlihatkan hasil tidak berbeda nyata. Kerusakan histologis yang ditemukan belum menyebabkan perubahan fungsi hepar.

Kata Kunci : *Rattus norvegicus*, Diazepam, Hepar, Duodenum, SGPT.

THE EFFECT OF DIAZEPAM ON THE HISTOLOGICAL STRUCTURE OF THE LIVER AND DOUDENAL ALBINO MALE RATS

(*Rattus norvegicus*, Berkenhout 1769)

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Abuse of drugs and chemical compounds is increasing nowadays, drug cases were found among the public has become increasingly serious. One of the sleeping pills are classified as drugs and circulating in the community is diazepam. Diazepam is benzodiazepine class of drugs which is a psychotropic drug class IV. Diazepam is absorbed by the duodenum and metabolised by the liver. The purpose of this study was to determine the changes in histological structure of the liver and duodenum as well as changes in liver enzymes SGPT and SGOT as a result of diazepam. This study used 12 rats were divided into 4 groups: control (polyethylen glycol 1000 1%) and 3 treatment diazepam (P1, P2 and P3) each with a concentration of 62.25; 83; 124.5 mg / kg / BB. Treatment was given for 28 days. SGPT and SGOT levels were measured on days 0, 7, 14, 21 and 28 after it was analyzed by one way ANOVA T-Test. After 28 days the rats in euthanasia and necropsy the liver and duodenum. Preparations made with paraffin method and hematoxylin eosin staining. Histological structure was observed using a microscope and made scoring. Damage to the liver histological diazepam treatment compared with the control. Damage to the liver histological structure observed is vacuolization, piknosis, sinusoidal dilation, cloudy swelling, fatty and Kupffer cell accumulation. Duodenal histological structural damage seen is dilated glands, edema, piknosis, congestion, epithelial erosion and infiltration of neutrophils. Damage increases with increasing dose. SGPT and SGOT enzyme analysis showed no significantly different results. Histological damage were found not changes in hepatic function.

Keyword: *Rattus norvegicus*, Diazepam, Liver, Duodenal, SGPT.