

**PENGARUH DIAZEPAM TERHADAP KADAR UREUM DAN
KREATININ URIN SERTA STRUKTUR HISTOLOGIS GINJAL TIKUS
PUTIH (*Rattus norvegicus*, Berkenhout 1769)**

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Intisari

Penggunaan NAPZA (Narkotika, Alkohol, Psikotropika, dan zat adiktif lain) di kalangan masyarakat belakangan ini makin marak terjadi. Salah satu NAPZA yang sering digunakan adalah diazepam. Diazepam adalah salah satu obat golongan hipnotik sedatif yang sering digunakan dan termasuk golongan benzodiazepin (obat penenang). Pada penelitian ini ingin dipelajari pengaruh pemberian diazepam terhadap fungsi ginjal melalui pemeriksaan kadar ureum dan kreatinin urin secara enzimatis dan secara histologis. Penelitian ini bersifat eksperimental dengan satu kelompok kontrol dan 3 kelompok perlakuan perlakuan yaitu Kontrol (PEG 1%), perlakuan I (62,25 mg/kg BB), perlakuan II (83 mg/kg BB), dan perlakuan III (124,5 mg/kg BB) dosis ini berdasarkan LD50 pada manusia. Pengambilan sampel urin dilakukan pada hari ke-0, 7, 14, 21, dan 28 dengan menggunakan kandang metabolit. Penetapan kadar ureum dengan metode Urease-GLDH dan kadar kreatinin dengan metode Jaffe. Pembuatan preparat histologi menggunakan metode parafin dengan pewarnan Hematoxylin dan Eosin (HE). Pemberian diazepam pada tikus putih selama 28 hari menaikkan kadar ureum dan kreatinin dalam urin serta menyebabkan kerusakan stuktur histologis ginjal yang ditandai dengan penyempitan dan pengkerutan glomerulus, piknosis, kariolisis, dan degenerasi perlemakan (vakuolisasi), hemoragi, kongesti, dan infiltrasi peradangan.

Kata Kunci : Diazepam, Ureum, Kreatinin, Ginjal, Tikus Putih.

**THE DIAZEPAM EFFECT TO THE UREUM AND CREATININE
LEVELS OF URINE AND RENAL HISTOLOGICAL STRUCTURE OF
RATS (*Rattus norvegicus*, Berkenhout 1769)**

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Abstract

The use of drugs (narcotics, alcohol, psychotropic, and other addictive substances) in the community recently increase more and more. One drug that is frequently used is diazepam. Diazepam were included in the class of sedative hypnotics that is belonged to benzodiazepines. This study will research the effect of diazepam on kidney function by histological analysis and enzymatic analysis of urine ureum and creatinine. This study was divided into one group of control solvent (PEG 1%) and 3 group treated with diazepam. Three treatment group were I : 62,25 mg/kg BB, II : (83 mg / kg), III : (124,5 mg/ kg). This was based on LD50 dose in humans. Urine sampling was done on day 0.7, 14, 21, and 28. Level of ureum and creatinine were examined by Urease–GLDH method and Jaffe method respectively. Preparations for histological slide were using paraffin method with Hematoxylin and eosin (HE) Stainny. Giving diazepam in albino rats for 28 days can increased levels of ureum and creatinin in the urine. It's cause damages in the kidney histological structure which were characterized by structure damage narrowing of the glomerulus, pycnosis, karyolysis, fatty degeneration (vacuolization), hemorrhage, congestion, and infiltration inflammation. In can be concluded that diazepam affects ureum and creatinine levels as well as causing damage of kidney histological structure.

Keywords: Diazepam, Ureum, Creatinine, Kidney, Albino Rats.