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EFEK RENOPROTEKTIF OBAT THIAMIN, CAPTOPRIL, VITAMIN E DAN HERBAL THREE IN ONE PADA TIKUS NEPHROLITHIASIS

ABSTRAK

Latar belakang: Nefrolitiasis atau batu ginjal (BG) merupakan kondisi umum yang mempengaruhi sistem kemih. Nefrolitiasis atau batu ginjal (BG) merupakan kondisi yang mempengaruhi sistem kemih, sekitar 12% populasi dunia (Alealign & Petros, 2018). Diperkirakan 1-15% orang menderita pembentukan batu ginjal selama hidupnya, dan prevalensi terjadinya batu ginjal diketahui meningkat di seluruh dunia (Morgan & Pearle, 2016). Tujuan penelitian ini untuk menganalisis efek obat thiamin (T), captopril (C), vitamin E (E), dan herbal kamil *three in one* (K) terhadap kadar kreatinin ureum pada tikus induksi etilen glikol.

Metode: Penelitian eksperimental murni *post test with control grup* dengan 25 tikus dibagi 5 kelompok perlakuan secara acak. Sampel darah tikus diambil melalui jantung setelah dilakukan anestesi dan pembedahan. Kadar kreatinin dan ureum dianalisis dengan *reagen kit* dan data di uji dengan *oneway Anova*.

Hasil: Kadar kreatinin tertinggi diperoleh kelompok K ($0,196 \pm 0,191$ mg/dl), kelompok T ($0,070 \pm 0,059$ mg/dl), dan C ($0,062 \pm 0,073$ mg/dL), kadar ureum tertinggi yaitu kelompok kamil K dan kelompok Negatif (N) dengan kadar $304,42 \pm 419,97$ mg/dl dan $140,84 \pm 59,73$ mg/dl, disusul vitamin E dengan kadar $77,96 \pm 5,824$ mg/dl. Ada perbedaan tidak bermakna kadar kreatinin dan ureum terhadap kelompok perlakuan.

Kesimpulan: Analisis efek pengobatan menggunakan thiamin, captopril, vitamin E dan kamil *three in one*, berbeda tidak bermakna terhadap kadar kreatinin dan tidak berefek terhadap kadar ureum dengan $p (>0,05)$.

Kata kunci: nephrolithiasis, renoprotektif, etilenglikol, kreatinin, ureum

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**RENOPROTECTIVE EFFECTS OF THIAMIN, CAPTOPRIL,
VITAMIN E AND HERBAL THREE IN ONE DRUGS ON
NEPHROLITHIASIS RATS**

ABSTRACT

Background: Nephrolithiasis or kidney stones (BG) is a common condition that affects the urinary system. Nephrolithiasis or kidney stones (BG) is a condition that affects the urinary system, approximately 12% of the world's population (Alealign & Petros, 2018). It is estimated that 1-15% of people suffer from kidney stone formation during their lifetime, and the prevalence of kidney stones is known to increase throughout the world (Morgan & Pearle, 2016). The aim of this study was to analyze the effects of the drugs thiamin (T), captopril (C), vitamin E (E), and the herbal kamil three in one (K) on urea creatinine levels in ethylene glycol induced rats.

Methods: Pure experimental research post test with control group with 25 mice randomly divided into 5 treatment groups. Rat blood samples were taken through the heart after anesthesia and surgery. Creatinine and urea levels were analyzed using a reagent kit and the data was tested using one-way Anova.

Results: The highest creatinine levels were obtained by group K (0.196 ± 0.191 mg/dl), group T (0.070 ± 0.059 mg/dl), and C (0.062 ± 0.073 mg/dL), the highest urea levels were the Kamil K group and the Negative (N) group. with levels of 304.42 ± 419.97 mg/dl and 140.84 ± 59.73 mg/dl, followed by vitamin E with levels of 77.96 ± 5.824 mg/dl. There was no significant difference in creatinine and urea levels between the treatment groups.

Conclusion: Analysis of the effects of treatment using thiamin, captopril, vitamin E and kamil three in one, did not differ significantly on creatinine levels and had no effect on urea levels with $p (>0.05)$.

Keywords: nephrolithiasis, renoprotective, etilenglicol, creatinine, ureum