

ABSTRAK

AKTIVITAS GASTROPROTEKTIF KOMBINASI EKSTRAK ETANOL RIMPANG JAHE (*Zingiber officinale*) DAN RIMPANG BANGLE (*Zingiber cassumunar*) PADA TIKUS YANG DIINDUKSI ETANOL – HCl SECARA PERORAL

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Latar Belakang : *Gastric ulcer* yang disebabkan etanol-HCl menyebabkan kerusakan pada mukosa lambung. Jahe dan Bangle berpotensi sebagai gastroprotektif. Penelitian ini bertujuan untuk mengetahui aktivitas gastroprotektif dari kombinasi ekstrak etanol jahe dan bangle dibandingkan ekstrak tunggalnya berdasarkan parameter histopatologi dan indeks ulkus.

Metodologi : Penelitian ini menggunakan 50 ekor tikus wistar jantan yang diagi menjadi 5 kelompok, masing-masing diberikan Lanzoprazol 30mg/200gBB, Tween 80 1%, ekstrak etanol jahe 200mg/200gBB, bangle 400mg/200gBB dan kombinasi 100:200/200gBB. Semua kelompok diberikan perlakuan secara peroral selama 6 hari. Pada hari ke-7, semua kelompok diinduksi etanol-HCl (1:1) 0,2 ml/25grBB. Enam jam kemudian tikus dikorbkan dan dibedah, lalu diambil lambungnya. Pengujian histopatologi dilakukan dengan metode pewarnaan hematoxylin dan eosin. Indeks ulkus dihitung dari rata-rata skor ulkus melalui pengamatan mikroskopik. Skor ulkus dianalisis dengan uji statistik Saphiro-Wilk dilanjutkan uji Kruskal-Wallis dan uji Man-Whitney.

Hasil Penelitian : Gambaran histopatologi pada kelompok perlakuan menunjukkan perbaikan ulkus dan pengurangan infiltrasi sel radang neutrofil. Indeks ulkus kelompok perlakuan masing-masing sebesar 1,1; 1,4; 1,1; 1,1; 1. Namun dari hasil statistik menunjukkan bahwa tidak terdapat perbedaan yang signifikan diantara kelompok perlakuan tersebut.

Kesimpulan : Kombinasi ekstrak etanol jahe dan bangle memiliki efek gastroprotektif yang lebih baik dibandingkan dengan ekstrak tunggalnya

Kata Kunci : *Zingiber Officinale, Zingiber Casummunar*, lesi mukosa, gastroprotektif.

ABSTRACT
ACTIVITIES GASTROPROTECTIVE COMBINATION ETHANOL EXTRACT
GINGER (*Zingiberofficinale*) AND BANGLE RHIZOME (*Zingiber cassumunar*) IN RATS
ARE INDUCIBLE ETHANOL - HCl IN ORAL

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Background: *Gastric ulcer* caused by ethanol-HCl causes damage to the gastric mucosa . Ginger and Bangle have the potential to be gastroprotective. This study aims to determine the gastroprotective activity of the combination of ethanol extract of galangal and turmeric compared to its single extract based on histopathological parameters and ulcer index.

Methodology: This study used 50 male wistar rats which were divided into 5 groups, each given 30mg / 200gBB Lanzoprazol, 1% Tween 80, 200mg / 200gBB *zingiber officinale* ethanol extract, 400mg / 200gBB *zingiber casumunar* and a combination of 100: 200 / 200gBB. All groups were given treatment orally for 6 days. On day 7, all groups induced ethanol-HCl (1: 1) 0.2 ml / 25grBB. Six hours later the rats were sacrificed and operated on, then their stomachs were taken. Histopathological testing was carried out by using the hematoxylin and eosin staining methods. The ulcer index was calculated from the average ulcer score through microscopic observation. Ulcer scores were analyzed using the Saphiro-Wilk statistical test followed by the Kruskal-Wallis test and the Man-Whitney test.

Results: The histopathological features in the treatment group showed improvement in ulcers and a reduction in neutrophil inflammatory cell infiltration. Ulcer index of the treatment group was 1.1; 1,4; 1,1; 1,1; 1. However, the statistical results show that there is no significant difference between the treatment groups.

Conclusion: The combination of ethanol extract of *zingiber officinale* and *zingiber casumunar* has a better gastroprotective effect than the single extract

Key words:, mucosal lesions, gastroprotective.