HUBUNGAN ANTARA *INFLAMMATORY HEMATOLOGICAL RATIO* DENGAN KEJADIAN ULKUS PEPTIKUM PADA PASIEN DISPEPSIA

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Intisari

Latar Belakang
Ulkus peptikum merupakan penyakit yang banyak ditemukan pada pasien dengan keluhan dispepsia. Reaksi inflamasi berperan penting dalam patogenesis ulkus peptikum. *Inflammatory hematological ratio* merupakan penanda inflamasi yang mudah diakses dan hemat biaya. Penelitian ini bertujuan untuk menentukan hubungan antara *Inflammatory hematological ratio* yang meliputi *neutrophil to lymphocyte ratio* (NLR), *platelet to limphocyte* ratio (PLR) dan *monocyte to limphocyte ratio* (MLR) dengan kejadian ulkus peptikum pada pasien dispepsia.
Metode
Penelitian ini merupakan penelitian observasional analitik, disain *case control* pada subjek penderita dispepsia yang telah menjalani pemeriksaan endoskopi di RSUP dr. Sardjito Yogyakarta. Data yang dianalisis adalah data sekunder dari database pusat endoskopi dan instalasi rekam medik. Analisis statistik ROC digunakan untuk mendapatkan *cut off* optimal NLR, PLR, dan MLR. Analisis bivariat menggunakan Uji *Chi-Square* dan analisis multivariat menggunakan Uji Regresi Logistik.
Hasil
Subyek penelitian ini dibagi dua yaitu kelompok ulkus dan kelompok bukan ulkus masing-masing 76. Kelompok ulkus memiliki proporsi tanda bahaya yang lebih banyak dibandingkan kelompok bukan ulkus (69,7 % dibandingkan 39,5 %). NLR, PLR dan MLR mempunyai kemampuan membedakan ulkus dan bukan ulkus dengan *area under curve* masing-masing 0,729 (95% CI 0,65-0,81), 0,661 (95% CI 0,57-0,75) dan 0,668; 95% CI 0,58-0,75). Nilai cut-off optimal untuk NLR, PLR dan MLR masing masing adalah 2,42; 166,85 dan 0,33. Analisis multivariat menunjukkan bahwa NLR, PLR dan MLR dengan cut off tersebut konsisten berhubungan dengan kejadian ulkus peptikum dengan odds ratio masing-masing 4,873 (95% CI 2,306–10,301); 4,098 (95% CI 1,896–8,858); dan 3,056 (95% CI 1,35-6,915).
Kesimpulan
Penelitian ini menunjukkan bahwa *inflammatory hematological ratio*, yaitu NLR, PLR, dan MLR, memiliki hubungan yang signifikan dengan kejadian ulkus peptikum pada pasien dispepsia.
Kata Kunci : Ulkus peptikum, *Inflammatory hematological ratio* , NLR, PLR, MLR

THE ASSOCIATION BETWEEN INFLAMMATORY HEMATOLOGICAL RATIOS AND THE OCCURRENCE OF PEPTIC ULCER IN DYSPEPTIC PATIENTS

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Abstract

Background
Peptic ulcer disease is commonly found in patients with dyspeptic complaints. Inflammatory reactions play an important role in the pathogenesis of peptic ulcers. Inflammatory hematological ratios are easily accessible and cost-effective inflammatory markers. This study aims to determine the relationship between inflammatory hematological ratios including neutrophil to lymphocyte ratio (NLR), platelet to lymphocyte ratio (PLR), and monocyte to-lymphocyte ratio (MLR) and the occurrence of peptic ulcers in dyspeptic patients.
Methods
This study was an analytical observational study with a case-control design involving dyspeptic patients who had undergone endoscopic examination at Dr. Sardjito General Hospital, Yogyakarta. Secondary data were obtained from the central endoscopy database and medical records. Receiver operating characteristic (ROC) curve analysis was used to determine the optimal cutoff values for NLR, PLR, and MLR. Bivariate analysis was performed using the Chi-square test, and multivariate analysis utilized logistic regression.
Results
The study subjects were divided into two groups: the ulcer group (n=76) and the non-ulcer group (n=76). Alarm features were more frequently observed in the ulcer group (69,7%) than in the non-ulcer group (39,5%). NLR, PLR, and MLR demonstrated discriminative ability between ulcer and non-ulcer cases, with area under the curve (AUC) values of 0,729 (95% CI 0,65–0,81), 0,661 (95% CI 0,57–0,75), and 0,668 (95% CI 0,58–0,75), respectively. The optimal cutoff values for NLR, PLR, and MLR were 2,42; 166,85; and 0,33, respectively. Multivariate analysis revealed that NLR, PLR, and MLR, at these cutoff points, were consistently associated with peptic ulcer occurrence, with odds ratios of 4,873 (95% CI 2,306–10,301), 4,098 (95% CI 1,896–8,858), and 3,056 (95% CI 1,35–6,915), respectively.
Conclusion
This study demonstrates that inflammatory hematological ratios (NLR, PLR, and MLR) are significantly associated with the occurrence of peptic ulcers in dyspeptic patients.
Keywords : Peptic ulcer, Inflammatory hematological ratios, NLR, PLR, MLR