

Hitung jenis leukosit sebagai prediktor neutropenia akut awitan pertama pascakemoterapi R-CHOP pada pasien diffuse large B-cell Lymphoma = Differential count of leukocytes as a predictor of the first onset acute neutropenia after R-CHOP chemotherapy in diffuse large B-cell Lymphoma patients

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Abstrak

Latar Belakang: Diffuse Large B-cell Lymphoma (DLBCL) merupakan limfoma tersering di Indonesia. Kemoterapi R-CHOP mempunyai risiko moderat untuk terjadinya neutropenia / demam neutropenia. Limfosit dapat menggambarkan imunitas pejamu, sedangkan neutrofil dan monosit dapat menggambarkan respons inflamasi. Belum ada penelitian yang menilai hitung jenis leukosit sebagai prediktor neutropenia akut awitan pertama pascakemoterapi R-CHOP pada pasien DLBCL.

Tujuan: Mengetahui hubungan parameter hitung jenis leukosit sebelum kemoterapi sebagai prediktor neutropenia akut awitan pertama pascakemoterapi R-CHOP pada pasien DLBCL.

Metode: Kohort retrospektif di RSUPN. Cipto Mangunkusumo. Pasien DLBCL 18-60 tahun, ECOG 0-1, tanpa komorbid yang berhubungan dengan kemoterapi, yang dilakukan kemoterapi R-CHOP 3 siklus pertama tanpa profilaksis G-CSF.

Hasil: Dari 95 pasien, neutropenia akut awitan pertama pascakemoterapi terjadi pada 83 (87,4%) subjek atau 83 (55,3%) siklus dari total 150 siklus kemoterapi. Demam neutropenia terjadi pada 50,6% dari awitan neutropenia. Neutropenia berat terjadi pada 34 (41,0%) siklus dari 83 episode neutropenia. Neutropenia akut awitan pertama paling sering terjadi pada 7-15 hari pascakemoterapi.

Rasio neutrofil limfosit mempunyai AUROC 0,74 (IK 95% 0,6-0,82); sedangkan limfosit absolut, neutrofil absolut, monosit absolut, dan rasio limfosit monosit mempunyai AUROC <0,70. Rasio neutrofil limfosit > 4,1 dapat memprediksi neutropenia akut awitan pertama pascakemoterapi RCHOP pada pasien DLBCL (sensitivitas 71,1%; spesivitas 64,2%; nilai duga positif 71,1%; dan nilai duga negatif 64,2%).

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Background: Diffuse Large B-cell Lymphoma (DLBCL) is the most common lymphoma in Indonesia. R-CHOP chemotherapy has a moderate risk for neutropenia / febrile neutropenia. Lymphocytes can describe host immunity, while neutrophils and monocytes can describe the inflammatory response. No study has assessed differential count of leukocytes as a predictor of the first onset acute neutropenia after R-CHOP chemotherapy in DLBCL patients.

Objective: To determine the relationship between differential count of leukocytes before chemotherapy as a predictor of the first onset acute neutropenia after R-CHOP chemotherapy in DLBCL patients.

Methods: Retrospective cohort in RSUPN. Cipto Mangunkusumo. DLBCL patients 18-60 years old, ECOG 0-1, no comorbidity related to chemotherapy. Subjects were given with the first 3 cycles of R-CHOP chemotherapy without G-CSF prophylaxis.

Results: Of the 95 patients, first onset acute neutropenia after chemotherapy occurred in 83 (87.4%) subjects or 83 (55.3%) cycles of 150 chemotherapy cycles. Febrile neutropenia occurs in 50,6% of the onset of neutropenia. Severe neutropenia occurs in 34 (41.0%) cycles of 83 neutropenic episodes. The first onset of

acute neutropenia is most common at 7-15 days after chemotherapy.

The neutrophil lymphocyte ratio has AUROC 0.74 (95% CI 0.65-0.82); while absolute lymphocytes, absolute neutrophils, absolute monocytes, and monocyte lymphocyte ratios have AUROC <0.70. The neutrophil lymphocyte ratio > 4.1 can predict the first onset of acute neutropenia after RCHOP chemotherapy in DLBCL patients (sensitivity 71.1%; specificity 64.2%; positive predictive value 71.1%; negative predictive value 64.2%).

Conclusion: The neutrophil lymphocyte ratio before chemotherapy > 4.1 has moderate performance in predicting the first onset of acute neutropenia post R-CHOP chemotherapy in DLBCL patients. Absolute lymphocytes count, monocytes count, neutrophils count, and monocyte lymphocyte ratio cannot be used as a predictor of the first onset acute neutropenia post R-CHOP chemotherapy in DLBCL patients.