

INTISARI

NILAI PROGNOSTIK HEMOGLOBIN DAN *RED BLOOD CELL DISTRIBUTION WIDTH* TERHADAP KESINTASAN HIDUP PADA LIMFOMA NON HODGKIN

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Latar Belakang

Setelah era rituximab, kemampuan skor IPI sebagai prediktor prognosis Limfoma Non Hodgkin (LNH) menjadi menurun. Sehingga penelitian tentang prediktor prognosis LNH masih terus dilakukan. Kadar hemoglobin (Hb) rendah dan *red blood cell distribution width* (RDW) tinggi pada awal diagnosis diketahui berhubungan dengan kesintasan hidup yang rendah pada pasien keganasan. Penelitian ini bertujuan untuk mengetahui nilai prognostik kadar Hb dan RDW terhadap kesintasan hidup pasien LNH yang menjalani kemoterapi di RSUP dr. Sardjito.

Metode Penelitian

Penelitian kohort retrospektif berdasarkan data rekam medis pasien LNH yang terdiagnosis sejak tahun 2014-2018 dan menjalani kemoterapi di RSUP dr. Sardjito. Hubungan antara kadar Hb dan RDW terhadap kesintasan hidup dianalisis menggunakan metode *Kaplan Meier* dan *Cox regression test*. Untuk menentukan faktor prediktor independen terhadap kesintasan hidup 3 tahun dilakukan analisa multivariat *cox regression* terhadap data karakteristik dasar (umur, jenis kelamin, IMT, status performa, stadium Ann Arbor, dan keterlibatan ekstranodal), Hb, dan RDW.

Hasil Penelitian

Dari 292 pasien LNH, didapatkan median Hb 12.7 gr/dL dan RDW 14.2%. Rerata kesintasan hidup 31,13 bulan, dengan pasien meninggal selama periode *follow up* 3 tahun sebanyak 38 pasien (13%). Sebab kematian terbanyak adalah sepsis (68,4%) dan 12 pasien (4.1%) meninggal dalam waktu <30 hari setelah kemoterapi. Berdasarkan analisis *univariat Cox Regression*, pasien dengan kadar Hb<10 gr/dL memiliki kesintasan hidup 3 tahun lebih rendah dibandingkan pasien dengan kadar Hb>10 gr/dL (71% vs 87%, CI 95%, p=0.014), dengan Hazard Ratio 2.49 (p = 0.02). Pasien dengan kadar RDW>15.5 memiliki kesintasan hidup yang lebih rendah dibandingkan pasien dengan kadar RDW<15.5 (77.5% vs 91.1%, CI 95%, p=0.002), Hazard Ratio 2,78 (p = 0.02). Berdasarkan analisa multivariat, status performa (OR=2.589, CI 95%, 1.225-5.471, p=0.013) dan RDW (OR=2.292, CI 95%, 1.106-4.748, p=0.026) merupakan faktor prediktor independen terhadap kesintasan hidup 3 tahun.

Kesimpulan

Pasien LNH dengan kadar Hb rendah dan kadar RDW tinggi memiliki kesintasan hidup yang lebih rendah.

Kata Kunci: *Limfoma Non Hodgkin, Hemoglobin, RDW, kesintasan hidup*

ABSTRACT

PROGNOSTIC VALUE OF HAEMOGLOBIN AND *RED BLOOD CELL DISTRIBUTION WIDTH* TO OVERALL SURVIVAL IN NON HODGKIN LYMPHOMA

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Background

After Rituximab era, baseline International Prognostic Index (IPI) is not sufficient for the initial risk stratification of patients with Non Hodgkin lymphoma (NHL). Low hemoglobin (Hb) levels and high red blood cell distribution width (RDW) baseline are known to be associated with poor outcome and overall survival in malignancy. The aims of this study were to evaluate the prognostic value of Hb and RDW to overall survival in LNH patients who undergoing chemotherapy at dr. Sardjito Hospital.

Method

Retrospective cohort study in LNH form patients' medical records diagnosed from 2014-2018 and undergoing chemotherapy at dr. Sardjito Hospital. The prognostic influence of clinical factors including Hb and RDW on 3 years overall survival were studied by using Kaplan Meier curves and univariate cox regression tests. To evaluate the independent prognostic relevance of basic characteristics data (age, gender, BMI, performance status, Ann Arbor stage, and extra nodal involvement), Hb, and RDW, multivariate cox proportional hazards regression were applied.

Results

From 292 LNH patients included, the median Hb was 12.7 gr/dL and median RDW was 14.2%. The mean survival time was 31.13 months, 38 patients (13%) died during the 3-years period of follow-up. The most common causes of death were sepsis (68.4%) and 12 patients (4.1%) died within <30 days of chemotherapy. Based on cox regression univariate analysis, patients with lower Hb levels (<10 gr/dL) had a 3-year survival lower than Hb>10 gr/dL (71% vs. 87%, CI 95%, p=0.014), with Hazard Ratio 2.49 (p = 0.02). Patients with higher RDW>15.5 levels had lower survival than patients with RDW<15.5 levels (77.5% vs. 91.1%, CI 95%, p=0.002), Hazard Ratio 2.78 (p = 0.02). Based on multivariate analysis, performance status (OR=2,589, CI 95%, 1,225-5,471, p=0.013) and RDW (OR=2,292, CI 95%, 1,106-4,748, p=0.026) are independent predictor factors of 3-year survival.

Conclusion

LNH patients with low Hb and high RDW levels have lower overall survival.

Keywords: Hemoglobin, RDW, Non Hodgkin Lymphoma, prognostic value, overall survival