

## INTISARI

### **HUBUNGAN PREVALENSI SUBTIPE MOLEKULER ABC/GCB DENGAN KARAKTERISTIK KLINIS PASIEN *DIFFUSE LARGE B-CELL LYMPHOMA* DI RSUP SARDJITO TAHUN 2012-2014**

**Latar belakang:** *Diffuse large B-cell lymphoma* (DLBCL) merupakan salah satu keganasan limfoid *non hodgkin* (NHL) tersering yang terjadi pada orang dewasa. Angka insidensi dan prevalensi limfoma - tidak terkecuali DLBCL - terus meningkat pada semua jenjang usia dari tahun ke tahun. Di Eropa dan Amerika Serikat, insidensi per tahun NHL diestimasi mencapai 15-20 kasus/100.000, diantaranya DLBCL bertanggung jawab atas 31% dari semua kasus NHL di negara barat dan 37% tumor sel B di dunia. Indonesia diperkirakan memiliki insidensi NHL sebesar 12.714 dengan prevalensi 5 tahun sebesar 21.089 kasus dan proporsi 11,7 per 100.000 penduduk. DLBCL secara molekuler terdiri dari dua tipe utama, yaitu: *activated B-cell-like DLBCL* (ABC-DLBCL) dan *germinal centre B-cell-like DLBCL* (GCB-DLBCL). Mayoritas pasien yang terdiagnosis GCB-DLBCL dapat sembuh dengan terapi konvensional R-CHOP. Sedangkan, lebih dari 50% pasien dengan ABC-DLBCL memiliki prognosis yang buruk. Data mengenai epidemiologi limfoma DLBCL imunotipe ABC/GCB di Indonesia sangat terbatas.

**Tujuan penelitian:** Penelitian ini memiliki tujuan untuk mengetahui hubungan prevalensi sub tipe molekuler ABC/GCB dengan karakteristik klinis pasien *diffuse large B-cell lymphoma* di RSUP Dr Sardjito.

**Metode penelitian:** Penelitian ini menggunakan desain penelitian potong lintang dan bersifat deskriptif analitik. Data merupakan data primer dan sekunder. Data primer berasal dari pengecatan imunohistokimia sediaan DLBCL di Departemen Patologi Anatomi RSUP Sardjito sesuai algoritme *Hans*, yang selanjutnya dinilai secara kualitatif oleh peneliti. Data sekunder berupa data klinis berasal dari rekam medis pasien *Diffuse Large B-Cell Lymphoma* di RSUP Sardjito.

**Hasil penelitian:** 76 dari 86 kasus DLBCL dianalisis pada penelitian ini. Ditemukan 49 kasus (64,5%) sebagai ABC dan 27 kasus (35,5%) sebagai GCB. Sampel terdiri dari 42 pria (55,3%) dan 34 wanita (44,7%) dengan umur median 56,5 tahun (3-83 tahun). 43 kasus (56,6%) berusia <60 tahun dan 33 kasus (43,4%) berusia ≥60 tahun. Berdasarkan keterlibatan ektranodal, 21 kasus (27,6%) merupakan penyakit nodal dan 55 kasus (72,4%) merupakan penyakit ektranodal.

**Kesimpulan:** Prevalensi ABC-DLBCL lebih tinggi daripada GCB-DLBCL pada kasus DLBCL di Indonesia. Kasus DLBCL di Indonesia ditemukan pada umur yang lebih muda dibandingkan kasus DLBCL secara global. Hubungan sub tipe molekuler dengan usia ( $p=0,271$ ) dan jenis kelamin ( $p=0,603$ ) tidak signifikan, namun hubungan sub tipe molekuler dengan keterlibatan ektranodal ( $p=0,027$ ) signifikan secara statistik.

**Kata kunci:** *Diffuse large B-cell lymphoma*; ABC-DLBCL; GCB-DLBCL; Algoritme Hans; Usia; Jenis kelamin; Keterlibatan Ektranodal

#### ABSTRACT

### PREVALENCE OF GCB-ABC MOLECULAR SUBTYPES OF DIFFUSE LARGE B-CELL LYMPHOMA IN ASSOCIATION WITH PATIENTS CHARACTERISTIC IN SARDJITO HOSPITAL YEAR 2012-2014

**Background:** Diffuse Large B-cell Lymphoma (DLBCL) is one of the most common non hodgkin lymphoid (NHL) malignancies in adults. The incidence and prevalence rates of lymphomas - including DLBCL - keeps rising in all age groups. In Europe and the United States, the incidence of NHL is estimated to reach 15-20 cases/100,000, in which DLBCL is accountable for 31% of all NHL cases in the western countries and 37% of all B-cell tumours globally. Indonesia is estimated to have an NHL incidence rate of 12,714 with a 5-year prevalence of 21,089 cases and a proportion of 11.7 per 100,000 population. DLBCL is divided into two main subgroups based on molecular subtyping: activated B-cell - like DLBCL (ABC-DLBCL) dan germinal centre B-cell - like DLBCL (GCB-DLBCL). The majority of patients diagnosed with GCB-DLBCL can be cured using conventional R-CHOP therapy, but more than 50% of patients with ABC-DLBCL have poor prognosis. Data regarding the epidemiology of ABC-DLBCL/GCB-DLBCL immunotype in Indonesia is very limited.

**Objective:** This study's purpose is to find out the prevalence of GCB-ABC molecular subtypes of Diffuse Large B-cell Lymphoma in association with patients characteristic in Sardjito Hospital.

**Methods:** This study uses a cross sectional research design and is descriptive analitic in nature. Data consists of primary data and secondary data. Primary data is derived from the immunohistochemistry staining of DLBCL tissues in the Department of Anatomical Pathology Sardjito Hospital according to the Hans algorithm, which is then analyzed qualitatively by the researcher. Secondary data consists of patient's clinical data derived from the medical records of diffuse large B-cell patients in Sardjito Hospital.

**Results:** 76 from 86 DLBCL cases were analyzed in this study. 49 cases (64.5%) were classified as ABC and 27 cases (35.5%) were classified as GCB. Sampels consisted of 42 males (55.3%) and 34 females (44.7%) with a median age of 56.5 years old (3-83 years old). 43 cases (56.6%) were aged <60 and 33 cases (43.4%) were aged 60 years or older. Based on extranodal involvement, 21 cases (27.6%) were nodal diseases while 55 cases (72.4%) were extranodal diseases.

**Conclusion:** The prevalence of ABC-DLBCL is higher than GCB-DLBCL in Indonesian cases. DLBCL cases in Indonesia is found to be at a younger age than DLBCL cases globally. The association between molecular subtypes with age ( $p= 0.271$ ) and sex ( $p= 0.603$ ) were insignificant, but association between molecular subtypes with extranodality ( $p= 0.027$ ) proved to be significant.

**Keyword:** Diffuse large B-cell lymphoma; ABC-DLBCL; GCB-DLBCL; Hans Algorithm; Age; Sex; Extranodality