

Demographic and overall survival pattern of diffuse large B-cell lymphoma in the university of Calabar teaching hospital, Calabar

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ABSTRACT

Background: In Diffuse Large B-cell Lymphoma is an aggressive heterogeneous form of Non-Hodgkin's lymphoma. There is dearth of information in the demographics and overall survival in low resource setting. The aim of this study is to determine the demography and overall survival pattern of Adult DLBCL at the University of Calabar Teaching Hospital. Method: The study is a retrospective study of 7 DLBCL patients seen and managed at the UCTH from June 2017 to August 2021. Male/female distribution was 2.5/1, with a median age of 62 years. Overall Survival (OS) and Progression Free Survival (PFS) were determined using the Kaplan-Meier techniques. The data were analysed using Microsoft Excel 2016 and IBM SPSS version 21. Results: Total of 7 DLBCL patients were seen over the 5-year-period of review median age 62 years. There were 5 males and 2 females. This study also shows an overall survival of 48 months with a median survival of 6.5 months. The survival distributions were not statistically significantly different, $\chi^2=3.204$, $p=0.073$. Conclusion: There is inconsistency in the demographic and overall survival pattern of Diffuse large B Cell lymphoma in our environment. Further study is needed to identify the factors which can help to improve the overall survival pattern in our environment.

Key words: B-cell lymphoma, overall survival, survival rate.

INTRODUCTION

Pain is an emotional and psychological mood, Diffuse Large B-Cell Lymphoma (DLBCL) constitutes 30%-40% of all cases of Non-Hodgkin Lymphoma worldwide [1]. DLBCL is the most common subtype of Non-Hodgkin lymphoma [2]. DLBCL is heterogeneous group of lymphoma with significant variation in clinical biological characteristics, response treatment and outcome. DLBCL is an aggressive lymphoma with poor prognosis [3]. Previously CHOP has been the mainstream of treatment with survival rate below 50% [4]. Thus the trend has changed with the addition of monoclonal antibody Rituximab (R-CHOP) and the survival rate has improved. DLBCL is said to occur more in male and older age of fifty and above [5]. There is dearth of information on the demographic and survival pattern of DLBCL in our environment. The aim of this study is to determine the demographic and overall survival pattern of DLBCL at the University of Calabar Teaching Hospital.

MATERIAL AND METHOD

Age

59 years-75 years.

Study Design

This study was a retrospective study of diffuse large B-cell Lymphoma seen at the UCTH from 2017-2021.

Study Area

The University of Calabar Teaching Hospital is a 600 bed Tertiary Health Institution that renders specialist care to its host and neighbouring communities

Subject

This include 7 patients diagnosed with DLBCL at our facilities via histology and confirmed with immunohistochemistry and have or yet to commence chemotherapy at the Haematology Day Care Unit

Selection Criteria

Those whose information was retrieved from the cancer registry

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and hospital record, also patient's folder were included in the study while those with omission and discrepancies from any part of the archives were excluded from the study. Furthermore, those who cannot be traced were also excluded. These data results collated were analysed using Microsoft Excel 2016 and IBM SPSS version 21. The data were analysed using simple inferential statistics (frequency and percentage). Survival analysis was done using Kaplan-Meier method for the survival studies. Overall Survival (OS) was calculated as: the number of subjects surviving divided by the number of subjects at risk (Table 1 and Figure 1 and 2).

RESULT AND DISCUSSION

This study shows inconsistency with available data on the demography and overall survival of diffuse B-cell lymphoma. Diffuse large B-cell lymphoma constitutes 4.9% and 36.4% of all adult lymphoma and haematological malignancies respectively during the period of review. This is similar to the finding by Madu et al., Hedstrom et al. also reported similar finding [6,4]. This study also reported male preponderance with a male to female ratio 2.5:1. This is similar to the study by Madu et al. [6]. This difference can be attributed to occupational exposure. The median age of DLBCL in our study is 62 years. This is similar to the study

by National Cancer Institute but differ from the study by Madu et al, this difference can be alluded to differences in study design as Madu et al. study was looking at heterogeneous group of Non-Hodgkin lymphoma [7,6]. Furthermore, this is also similar to the finding of a study conducted by a Swedish Lymphoma group in Sweden [4]. The overall survival pattern during the period of review showed an improvement from 2020 to 2021. This can be attributed to increased number of competent personnel, improved diagnosis and also affordability of Rituximab (Mabthera) due to the implementation of Cancer Associated Programme (CAP) knowing how the cost impeded the ability of patients to purchase the drug, but with the advent of CAP, it is now coming at a more discounted and affordable rate if more can be done to further reduce the cost and allow for more purchasing power. This study also shows an overall survival of 48 months with a median survival of 6.5 months. this is different from the study in the western world which reveal 5 years [8]. which can be attributed to late presentation due to Spiritism, delay in diagnosis, inadequate personnel, increased prevalence of co morbidity such as (HIV, Diabetes Mellitus) and low social economic status.

The limitations of this study include those inherent to any retrospective study, while DLBCL diagnosis is documented.

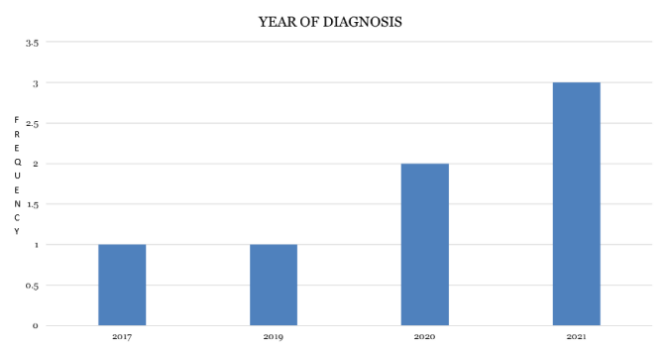


Fig. 1. Years of diagnosis

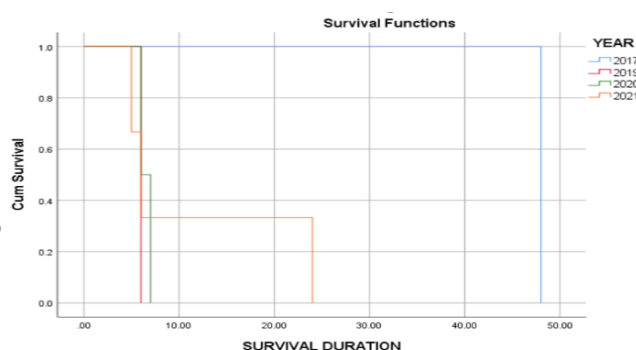


Fig. 2. Kaplan-Meier survival graph: A log rank test was run to determine if there were differences in the survival distribution for the different period of diagnosis. The survival distributions for patients were not statistically significantly different, $\chi^2(2) = 2.732$, $p=0.435$

Demographics		Frequency	Percentage (%)
Sex	Male	5	71.43
	Female	2	28.57
Status	Dead	6	85.71
	Alive	1	14.29
Duration of survival (Months)	5	1	14.29
	6	3	42.86
	7	1	14.29
	24	1	14.29
	28	1	14.29

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