Incursions into the Epidemiological Spectrum and Treatment Strategy of Aggressive Non-Hodgkin Lymphomas

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INTRODUCTION

Aggressive non-Hodgkin's lymphomas (NHL) are the most common malignant neoplasms of lymphoid tissue, which usually affects the middle-aged and elderly population. The main reasons of poor outcomes may be the lower ability to tolerate the treatment, the impaired bone marrow function and the presence of comorbidities, especially in elderlies.

OBJECTIVE

The aim of the study was to identify the epidemiological features and to assess the treatment approaches in the aggressive NHL.

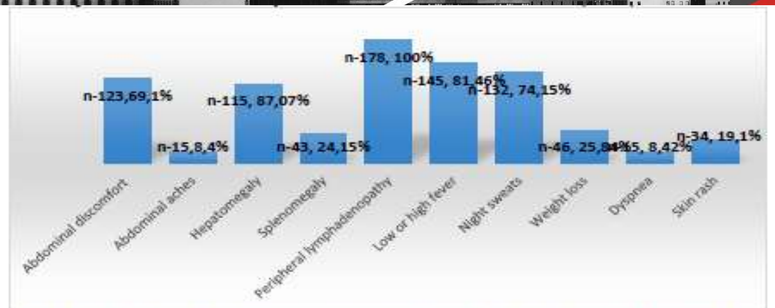


Figure 1. Graphical representation of the incidence of clinical symptoms in patients with aggressive non-Hodgkin's lymphomas

METHODS

DESIGN: We performed a descriptive and cohort study. The stage of NHL was asserted with regard to the criteria of Lugano Classification of Malignant Lymphomas. The selected patients' data were compared at the step of inpatient admission according to the stage, histopathological, immunohistochemical and imaging examinations.

SETTING: The patients' follow-up was performed at the comprehensive cancer center, and affiliated to the hospitalized and outpatient care.

PARTICIPANTS: The study included 178 NHL patients treated at the Oncological Institute of Moldova between 2019-2022.

INTERVENTIONS: The retrospective and prospective patients' cohorts were evaluated. The mainly used antineoplastic regimens were R-CHOP, R-COP, CHOP and CHOEP. Forty-seven (26.4%) patients underwent loco-regional radiotherapy. The following researching methods were used: epidemiological, descriptive and comparative statistics, big data transfer.

RESULTS

A slight predominance of males (58.9%) was revealed among the patients diagnosed with the aggressive NHL. Sixty-five (36.5%) patients were aged 40-49 years, and 7 (3.9%) were older than 70 years. Aggressive NHL exhibited the following histological distribution: diffuse large B-cell lymphomas (DLBCL) – 87.64%, Burkitt lymphoma – 2.24%, peripheral T-lymphomas – 9.62% and HIV-associated lymphomas – 0.5%. Stage IVB was established in 84 (47.1%) patients. None of the patients presented with stage I at diagnosis. Complete response was achieved in 32 (18.1%) cases, and partial response – in 57 (32.2%). R-CHOP regimen proved to be the most efficient, with a 3-year progression-free survival of 26%. The overall 3-year survival accounted 100% in Burkitt

DISCUSSIONS

Aggressive lymphomas include diffuse large Bcell lymphoma, Burkitt lymphoma, precursor B-cell and T-cell lymphoblastic leukemia/lymphoma, adult Tcell leukemia/lymphoma, and certain other peripheral T-cell lymphomas.[Diffuse large B-cell lymphoma (DLBCL) is the most common subtype of aggressive lymphoma, accounting for 30-35% of all non-Hodgkin's lymphomas, being the most common among aggressive non-Hodgkin's lymphomas [6]. Although DLBCL shows an aggressive clinical evolution, it can be cured in 60-70% of cases via the standard therapy of rituximab, cyclophosphamide, hydroxydaunorubicin, vincristine, and prednisolone (R-CHOP). The complex pathophysiology of elderly patients with malignant lymphoma is a clinical challenge. Less aggressive treatment may reduce the chances of being cured, prolong life and/or control symptoms, while aggressive treatment may result in treatment-related morbidity and mortality and/or poor quality of life. The main reason for poor outcome in the elderly is their lower ability to tolerate treatment. Impaired bone marrow function, altered drug metabolism, and the presence of comorbid diseases may increase the number of treatment-related complications. However, it is possible to improve outcomes for the elderly patient with NHL.

CONCLUSIONS

The commonly affected by NHL population group was aged 40-49 years. DLBCL proved to be the most frequent histological type. R-CHOP regimen remains the first-line treatment approach. Radiotherapy increased response rate and overall survival in bulky disease.

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