Reasons for non referral for autologous stem cell transplant in Central Nervous System Lymphoma patients in a minority rich, ethnically diverse and socioeconomically disadvantaged population at Montefiore Medical Center/ Albert Einstein College of Medicine.

Narvel H[1], Yakkali S[2], Bazarbachi A S[1],Wang S[1], De Castro A[3], Narvel A[4], Mustafa J[3], Khatun F[3], Lombardo A[3], Gritsman K[3], Goldfinger M[3], Kornblum N[3], Shastri A[3], Mcneill K[3], Janakiram M[3], Mantzaris I[3], Verma A[3], Braunschweig I[3], Sica A[3]

[1]Jacobi Medical Center, Albert Einstein College of Medicine, New York, USA. [2]Seth G.S. Medical College and K.E.M. Hospital, Mumbai, India. [3]Montefiore Medical Center, Albert Einstein College of Medicine, New York, USA. [4]Pravara Institute of Medical Sciences, Ahmednagar, India

Background

Autologous hematopoietic stem cell transplantation (ASCT) is a potentially curative therapy for individuals suffering from CNS lymphoma. There is a paucity of data about individual reasons that can affect access to ASCT in CNS lymphoma patient, especially in the Bronx county which has a high prevalence of HIV, and the largest number of women living with HIV than any other county in USA.[1]

Objective

We investigated the factors and the reasons that limit individual CNS lymphoma patients' access to autologous stem cell transplantation (ASCT)

Methods

The charts of 71 patients with CNS lymphoma treated at Montefiore Medical Center between 06/15/1999 and 04/05/2022 were evaluated. Due to a lack of data on the date of diagnosis, one subject was omitted from the study. The SPSS program was used to analyze the data, and the chi-squared test or Fisher's exact test was used for categorical variables when suitable.

Results

A total of 71 individuals with CNSL were found, with a median age of 63 years at diagnosis. 54 patients had biopsy proven primary CNS lymphoma while 16 patients had secondary CNS lymphoma. The racial distribution of the population is in Figure 1. 17 % (n = 12) of the patients were HIV positive. 34 % (n = 24) patients underwent consolidative ASCT. Race / ethnicity and socioeconomic status did not significantly impair access to ASCT. Only one patient with HIV positivity received ASCT and HIV positivity was associated with poor ECOG (>2) at diagnosis. (p=0.03) HIV positivity limited access to ASCT. **(p=0.04).**Those who underwent ASCT had a significantly better post treatment ECOG and karnofsky performance status (**p=0.0005** and **p=0.0001** respectively). We evaluated the reasons that affected access to ASCT amongst individual patients. (figure 3) The decade of diagnosis did not significantly affect access to ASCT. (p=0.4) There was no significance difference in access to ASCT among primary and secondary CNS lymphoma patients. (p= 0.1)

Figure 1: Race/ethnicity of the population

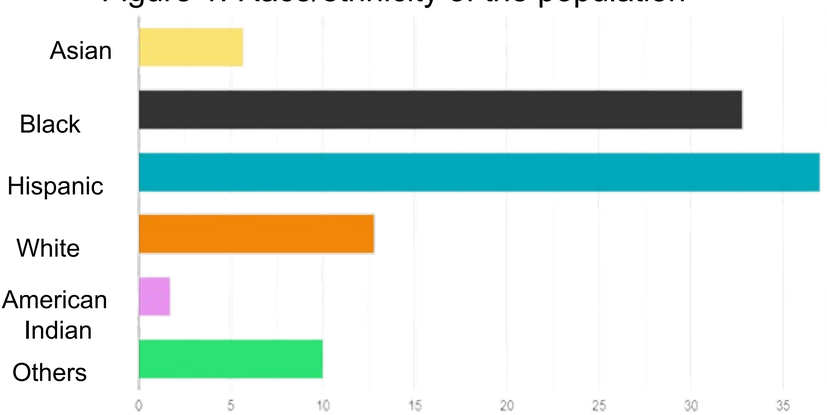


Figure 2 :

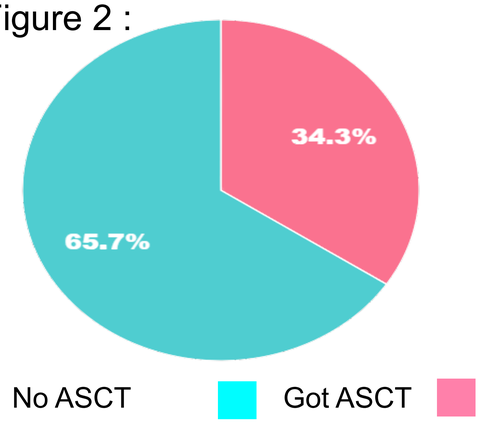
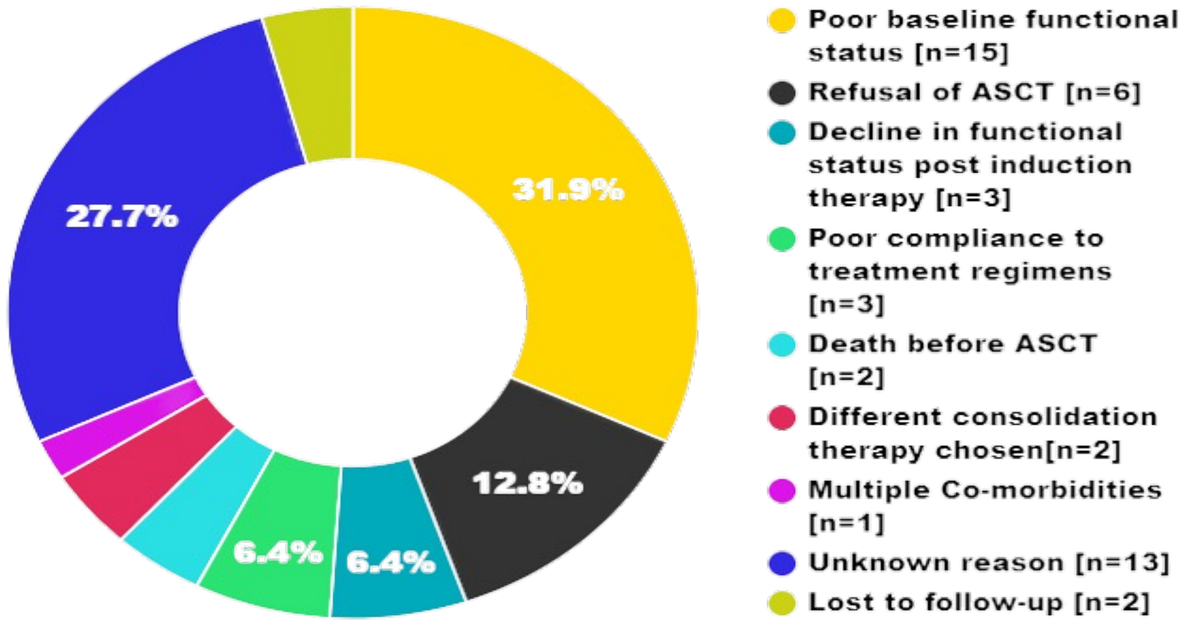


Figure 3: Reasons limiting access to ASCT



Conclusion

In our population, ASCT significantly improved the performance status of both primary and secondary CNS lymphoma patients. Multiple modifiable factors were a cause for non-referral of patients for ASCT of which medical reasons like poor functional status were the leading causes . HIV status was also a significant factor for limiting access to ASCT, since 95.5 % of the HIV positive patients did not receive ASCT. In a study done by Hyun D et al at Grady memorial hospital, poor functional status was the most important factor limiting access to ASCT[2]. Since around 20 % of the patients refused ASCT or were non compliant to treatment, personal preferences or mistrust of the medical system is also an important factor that can affect certain groups more than the other and is often overlooked in cancer disparity studies. Earlier referral and multi-disciplinary team of providers to create individualized supportive care may not only improve ASCT access but can be used to identify subtle issues that may preclude ASCT (e.g., lack of social support, comorbidities, functional impairment), as well as to predict morbidity and mortality.

Bibliography

1. https://www.cdc.gov/nchhstp/atlas/index.htm

2. Yun, H. D., Dossul, T., Bernal-Mizrachi, L., Switchenko, J., Ndibe, C., Ibraheem, A., Dixon, M. D., Langston, A. A., Nooka, A. K., Flowers, C. R., Pentz, R. D., & Waller, E. K. (2016). Referral Patterns and Clinical Outcomes for Transplant-Eligible Lymphoma and Myeloma Patients Evaluated at an Urban County Hospital . *Journal of stem cell research & therapy*, *6*, 328. https://doi.org/10.4172/2157-7633.1000328j