



The 65th ASH Annual Meeting Abstracts

ONLINE PUBLICATION ONLY**905.OUTCOMES RESEARCH-LYMPHOID MALIGNANCIES****Prognostic Factors in Hospitalized Patients with HIV-Associated Burkitt's Lymphoma - Real World Data Analysis**Rayli Pichardo, MD¹, Aula Ramo, MD¹, Yazan Abu Omar², Vrushali S. Dabak, MD³¹Henry Ford Health, Detroit, MI²University of Michigan, Ann Arbor, MI³Henry Ford Hospital/Wayne State University, Detroit, MI**Introduction**

Burkitt Lymphoma (BL) is a highly aggressive and rare B-cell non-Hodgkin Lymphoma, characterized by translocation and dysregulation of the MYC gene. BL comes in three distinct forms: endemic, sporadic, and immunodeficiency related, which is most commonly secondary to HIV. Despite improvements in antiretroviral therapy (ART), the reported incidence of BL has remained stable over time. BL is a highly curable disease in patients able to tolerate aggressive therapies. However, little is known about real-world outcomes in United States patients with HIV-related BL. Our study highlights multiple factors associated with inpatient mortality and morbidity.

Methods

The National Inpatient Sample database was queried from October 2015 to December 2020.

Adults aged ≥ 18 with a primary diagnosis of BL were identified and stratified into those with and without HIV. Complications included were queried using ICD codes most found in the secondary diagnosis variables. Baseline characteristics, inpatient complications, and outcomes were compared using chi-squared and Wilcoxon rank-sum tests. Logistic regression analysis was performed to assess the risk of death before and after adjusting for multiple risk factors.

Results

We found 3,650 admissions with a primary diagnosis of BL, 400 (11%) of whom had HIV. Patients with HIV were younger, 49% were younger than 40 years old as compared to 29% in patients with no HIV. There was a higher percentage of black patients 115 (29%), and most had Medicaid 170 (44%), there was no difference between income, hospital bed size or geographical region. Interestingly, in multivariable analysis, there were no significant differences in length of stay, race, or mortality between patients with and without HIV. The factors associated with mortality in HIV patients included acute renal failure OR 11.4 (1.22 to 107) and Sepsis OR 38.6 (1.62 to 921)

Conclusion

BL is an increasingly important disease in HIV-infected patients given that the incidence remains high despite advances in ART. This nationwide data analysis demonstrates the demographic characteristics of patients with HIV-associated BL in the US and the encouraging findings that outcomes are not significantly different between patients with and without HIV. Yet our study demonstrates the disproportionate distribution of HIV-BL in females and black patients. Further studies are needed to examine gender and racial disparities.

Disclosures No relevant conflicts of interest to declare.

Table 1 Hospitalizations with Burkitt Lymphoma

| Characteristic | Overall, N = 3,650 | No HIV N = 3,250 | HIV N = 400 | p-value |
|-----------------------------------|--------------------|---------------------|----------------|---------|
| | Age <40 | 1,130 (31) | 935 (29) | |
| Race (Black) | 255 (7.2) | 140 (4.5) | 115 (29) | <0.001 |
| Low Income Population | 865 (24) | 735 (23) | 130 (33) | 0.077 |
| Insurance | | | | <0.001 |
| Medicare | 1,020 (28) | 1,005 (31) | 15 (3.8) | |
| Medicaid | 710 (20) | 540 (17) | 170 (44) | |
| Private Insurance | 1,635 (45) | 1,485 (46) | 150 (38) | |
| Self-pay | 145 (4.0) | 110 (3.4) | 35 (9.0) | |
| No Charge | 15 (0.4) | 5 (0.2) | 10 (2.6) | |
| Other | 115 (3.2) | 105 (3.2) | 10 (2.6) | |
| Hospital Bedsize | | | | 0.14 |
| Small | 305 (8.4) | 285 (8.8) | 20 (5.0) | |
| Medium | 775 (21) | 715 (22) | 60 (15) | |
| Large | 2,570 (70) | 2,250 (69) | 320 (80) | |
| Hospital Region (South) | 1,490 (41) | 1,280 (39) | 210 (52) | 0.12 |
| Tumor Lysis Syndrome | 855 (23) | 805 (25) | 50 (12) | 0.016 |
| Acute Renal Failure | 940 (26) | 860 (26) | 80 (20) | 0.19 |
| Sepsis | 300 (8.2) | 265 (8.2) | 35 (8.7) | 0.86 |
| Acute Hypoxic Respiratory Failure | 355 (9.7) | 335 (10) | 20 (5.0) | 0.13 |
| Length of Hospital Stay | 14 (14) | 13 (14) | 16 (15) | 0.23 |
| Mortality | 320 (8.8) | 290 (8.9) | 30 (7.5) | 0.67 |

Table 2. Univariable and multivariable analysis of factors associated with mortality in HIV-associated Burkitt's lymphoma

| Characteristic | Univariable | | Multivariable | |
|----------------|---------------------|---------|---------------------|---------|
| | OR (95% CI) | p-value | OR (95% CI) | p-value |
| Female | 5.73 (0.98 to 33.5) | 0.046 | 18.3 (0.92 to 365) | 0.048 |
| Age group >65 | 0.91 (0.18 to 4.53) | 0.90 | 0.34 (0.09 to 1.30) | 0.10 |
| Race (White) | 1.12 (0.43 to 2.90) | 0.81 | 0.51 (0.15 to 1.79) | 0.27 |
| TLS* | 1.44 (0.13 to 15.5) | 0.75 | 0.17 (0.01 to 2.73) | 0.20 |
| AKI* | 4.69 (0.77 to 28.7) | 0.085 | 11.4 (1.22 to 107) | 0.027 |
| Sepsis | 17.5 (2.53 to 121) | 0.003 | 38.6 (1.62 to 921) | 0.019 |
| AHRF* | 18.0 (1.86 to 174) | 0.010 | 6.63 (0.26 to 168) | 0.23 |

*TLS: Tumor Lysis Syndrome, AKI: Acute Kidney Failure, AHRF: Acute Respiratory Failure

Figure 1

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