POLYSUBSTANCE USE IN LYMPHOMA: DISPARITIES IN TREATMENT AND MORTALITY IN A NATIONAL COHORT

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Introduction

Polysubstance use in patients with lymphoma may impact both treatment delivery and in-hospital outcomes. Despite the increased healthcare burden associated with substance use, it remains unclear how this population fares in real-world hospital settings. This study investigates differences in demographics, treatment, and outcomes between lymphoma patients with and without polysubstance use.

Aim

To compare clinical characteristics, treatment patterns, and in-hospital outcomes between hospitalized lymphoma patients with and without polysubstance use.

Objectives

- Stratify lymphoma patients by presence or absence of polysubstance use
- Compare demographics, insurance status, and comorbidities
- Assess differences in mortality, sepsis, and treatment utilization
- Calculate adjusted odds of treatment and complications using multivariable regression

Methods

This retrospective cohort study used the National Inpatient Sample (NIS) database from 2016–2020. ICD-10 codes identified lymphoma hospitalizations and flagged polysubstance use. Categorical variables were compared using chi-square tests and continuous variables with t-tests. Logistic regression models, adjusted for age, sex, race, gender, and Charlson Comorbidity Index (CCI), assessed odds of receiving chemotherapy, transfusion, bone marrow transplant, and developing sepsis.

Results

Demographics:
- Mean Age: 58.2 (PSU) vs. 64.0 years ($p < 0.001$)
- Female: 33.9% vs. 44.6%
- Black: 14.1% vs. 8.8%
- Hispanic: 7.4% vs. 10.1%
- Asian: 1.2% vs. 3.6%

Insurance Disparities:
- Medicare: 45.3% vs. 56.7%
- Medicaid: 22.7% vs. 9.2%
- Private: 24.8% vs. 29.8%
- Self-pay: 3.8% vs. 1.9%

Clinical:
- CCI: 6.0 vs. 6.2 ($p < 0.001$)
- Mortality: 3.9% vs. 4.9%
- Sepsis: 13.5% vs. 14.1%

Treatment Utilization (Unadjusted):
- Chemotherapy: 23.1% vs. 29.5%
- Transfusion: 8.9% vs. 10.9%
- Bone marrow transplant: 2.2% vs. 2.9%

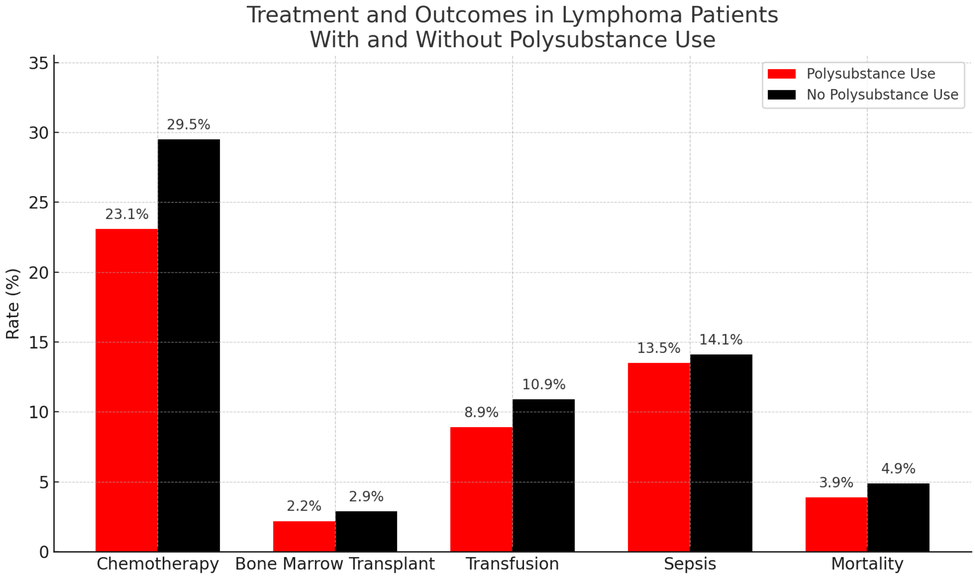
Adjusted Odds (aOR):
- Chemotherapy: 0.578–0.596
- Bone marrow transplant: 0.767–0.833
- Sepsis: 0.894–0.919

Summary

Lymphoma patients with polysubstance use were younger, more racially diverse, and more likely to be covered by Medicaid or self-pay. Despite lower comorbidity burden and mortality, this group received less chemotherapy and fewer bone marrow transplants.

Discussion

These disparities may reflect provider hesitancy, systemic bias, or undocumented contraindications. Further investigation is needed to ensure equitable care delivery, especially in vulnerable populations with substance use.



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