Primary Central Nervous System Lymphoma in Latin America: Real-World Clinicopathological Characteristics and Survival Outcomes from a National Reference Center

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INTRODUCTION

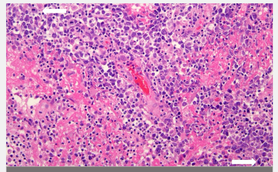
Primary central nervous system lymphoma (PCNSL) is a rare and aggressive extranodal non-Hodgkin lymphoma. Data from Latin American populations are scarce, particularly regarding real-world clinical presentation, treatment strategies, and survival outcomes.

Clinical presentation

Survival outcomes

AIM

To describe the clinical-pathological characteristics, treatment patterns, and survival outcomes of patients with PCNSL treated at a national cancer referral center in Mexico.



There is a diffuse infiltrate of intermediate to large, pleomorphic lymphocytes in the brain parenchyma. . Contributed by Lena Young, D.O.

METHOD

We conducted a retrospective cohort study including 25 patients diagnosed with PCNSL at a national cancer referral center in Mexico between 2010 and 2025. Comprehensive clinical, laboratory, pathological, treatment, and outcome data were collected and analyzed. Overall survival (OS) was estimated using the Kaplan–Meier method, and follow-up was calculated using the reverse Kaplan–Meier approach.

CONCLUSIONS

This real-world cohort provides important insights into the clinical and epidemiological characteristics of PCNSL in a Latin American population. Patients presented at a younger age and had a higher prevalence of HIV-associated disease compared with international reports. Despite limited access to advanced consolidation strategies such as autologous transplantation, survival outcomes were comparable to global benchmarks.

RESULTS

The **mean age** at diagnosis was **43.6 years.**

A slight **male** predominance **56%**

HIV infection was identified in **28%**

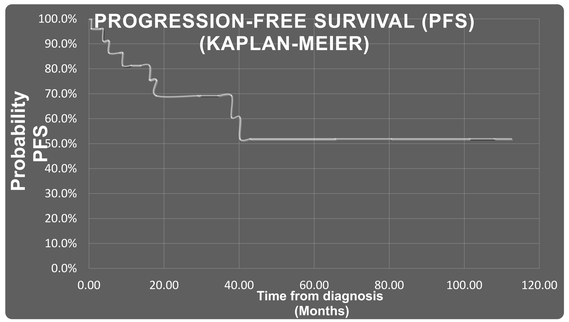
Neurological symptoms were present in **96%** of patients at diagnosis

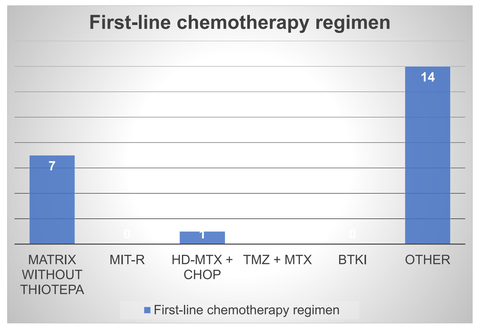
Parenchymal brain involvement was the most common pattern, observed in nearly all patients

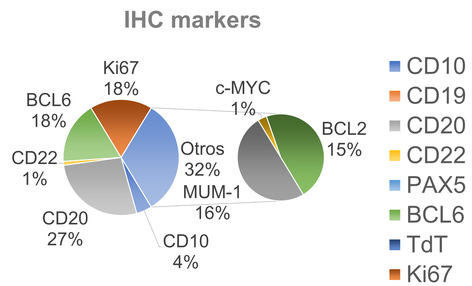
- Isolated parenchymal disease **60%**
- Parenchymal and leptomeningeal involvement **40%**

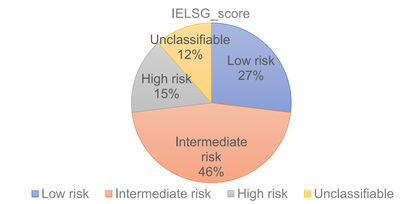
Histopathological confirmation was obtained in **96%** of cases, all corresponding to diffuse large B-cell lymphoma.

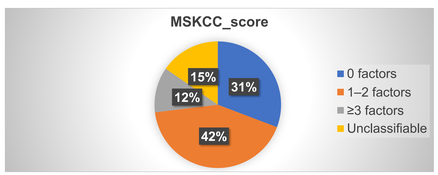
All patients received **high-dose methotrexate-based therapy**, reflecting current standard-of-care practices.











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Abbreviations: Primary central nervous system lymphoma (PCNSL); overall survival (OS); progression-free survival (PFS); IELSG score (International Extranodal Lymphoma Study Group score); MSKCC score (Memorial Sloan Kettering Cancer Center score); Temozolomide plus methotrexate (TMZ + MTX); high-dose methotrexate plus CHOP (HD-MTX + R-CHOP); Methotrexate, Temozolomide, and Rituximab (MIT-R); BTKi-based therapy: ***Bruton's Tyrosine Kinase Inhibitor-based therapy.***