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# Plasmablastic Lymphoma: A Retrospective Study from a Single Tertiary Center in Brazil

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## Abstract

**Background:** Plasmablastic lymphoma (PBL) is a rare and aggressive subtype of diffuse large B-cell lymphoma, strongly associated with HIV infection and immunosuppression. Despite advances in therapy, outcomes remain poor and there is no established standard of care.
**Objectives:** To evaluate the clinical, epidemiological, histopathological characteristics and treatment outcomes of patients diagnosed with PBL at a tertiary referral center in Brazil.
**Methods:** We conducted a retrospective longitudinal study including all patients diagnosed with PBL at the Hematology and Hemotherapy Department of Santa Casa de São Paulo. Clinical data, laboratory parameters, histopathological findings, treatment regimens, and outcomes were reviewed from medical records.
**Conclusion:** PBL remains a highly aggressive lymphoma with heterogeneous presentation and poor outcomes. Larger multicenter studies are needed to define optimal therapeutic strategies.

## Introduction

Plasmablastic lymphoma (PBL) was first described in 1997 and initially associated predominantly with HIV-positive individuals presenting with extranodal disease, particularly involving the oral cavity [1]. Although strongly linked to HIV infection, an increasing number of cases have been described in HIV-negative patients, particularly in the setting of immunosuppression [2].

PBL shows a high association with Epstein–Barr virus (EBV) infection and frequently harbors MYC gene rearrangements, suggesting a key role in its pathogenesis [3,4,5]. The disease is characterized by plasmacytic immunophenotype, including expression of CD79a, CD38, CD138, MUM1, and BLIMP1, and absence of CD20 expression, which contributes to therapeutic challenges [3,5].

Due to overlapping features with multiple myeloma and other aggressive lymphomas, diagnosis is often difficult and requires careful histopathological and immunophenotypic evaluation [6].

There is no established standard treatment. CHOP-like regimens have shown limited efficacy, and more intensive protocols such as dose-adjusted EPOCH, CODOX-M/IVAC, and HyperCVAD are commonly recommended [3,7,8]. Despite aggressive treatment approaches, prognosis remains poor, particularly in relapsed or refractory disease [3,6].

## Methods

**Study Design:** Retrospective, single-center, longitudinal study.
**Patients:** All patients diagnosed with plasmablastic lymphoma at Santa Casa de São Paulo were eligible. Diagnosis was confirmed by histopathology and immunohistochemistry.

**Inclusion Criteria:**
- Histologically confirmed PBL
- Available clinical and treatment data

**Exclusion Criteria:**
- Inconclusive biopsy
- Incomplete or unavailable medical records

**Data Collection:** Clinical, laboratory, and pathological data were obtained from medical records. Variables analyzed included age, sex, HIV status, EBV status, disease stage, IPI score, bone marrow involvement, treatment regimen, response to therapy, progression-free survival (PFS), and overall survival (OS).

### Ethical Considerations

This study was approved by the Institutional Research Ethics Committee. Patient confidentiality
was maintained according to institutional and international ethical standards.

## Funding

This study did not receive external funding.

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