HIV-Associated Plasmablastic Lymphoma Presenting With Spontaneous Tumor Lysis Syndrome and Hypercalcemia of Malignancy

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BACKGROUND

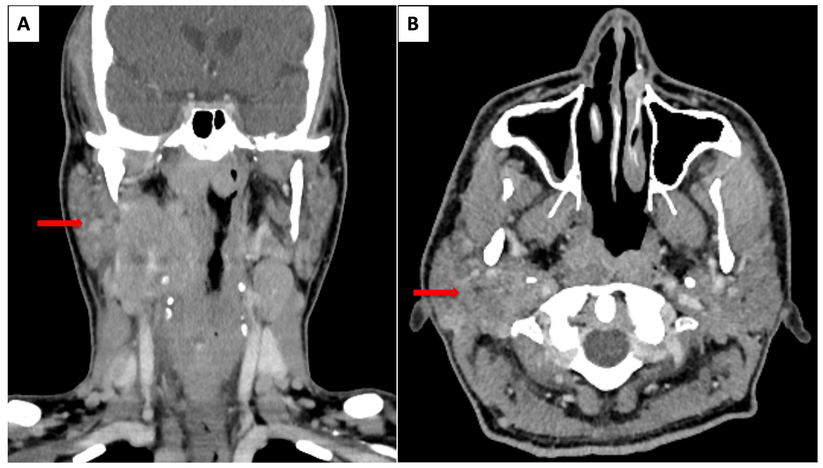
- **Plasmablastic lymphoma (PBL)** is a **rare, highly aggressive** subtype of diffuse large B-cell lymphoma
- Strongly associated with **advanced or untreated HIV infection**
- **Delayed HIV diagnosis** in underserved populations increases the risk of **advanced malignancies and complex presentations**.
- **Spontaneous tumor lysis syndrome (sTLS)** and **hypercalcemia** are **exceptionally rare complications** of PBL.
- We report a case of **HIV-associated PBL presenting as the initial manifestation of undiagnosed HIV**, complicated by **sTLS and hypercalcemia**, highlighting diagnostic and management challenges in a **safety-net hospital setting**.

CASE PRESENTATION

- 40-year-old male
- **Chief complaint:** 2 days of right facial and neck swelling
- History of unprotected sexual contact with male and female partners
- **Physical Examination:** Vitals stable; physical examination notable for right facial swelling and oral candidiasis.
- **Laboratory findings:** Leukopenia, thrombocytopenia, elevated creatinine, hyperuricemia, hyperphosphatemia, hypercalcemia, positive HIV (CD4 count 117 cells/µL), and positive Epstein–Barr virus (EBV) DNA in plasma.
- **Management:** Aggressive intravenous hydration + uric acid–lowering therapy (allopurinol or rasburicase) + Antiretroviral therapy (ART) + EPOCH chemotherapy (etoposide, vincristine, doxorubicin, cyclophosphamide, prednisone).
- **Outcome:** Spontaneous tumor lysis syndrome (sTLS) and hypercalcemia resolved prior to discharge.

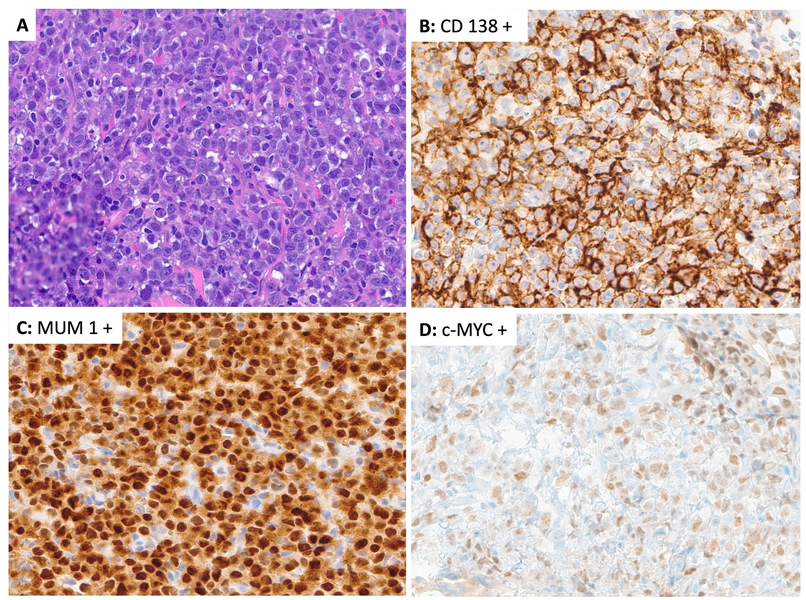
IMAGING

Figure 1 - CT of the neck with contrast revealed a 4.3 × 3.0 × 5 cm mass (red arrow) encasing the right carotid artery in coronal (A) and axial (B) section



PATHOLOGY

Figure 2 - Pathological hallmarks include plasmablastic/immunoblastic morphology **(A)**, expression of plasma cell-associated antigens (CD138, MUM1) **(B, C)**, lack of expression of antigens associated with B cell differentiation (CD20, PAX5), and negativity for HHV8 and ALK



DISCUSSION

- **Median age of presentation - 42 years**, with **male predominance (78%)**.
- **Extranodal disease occurs in 95% of cases**, most commonly involving the **oral cavity/jaw (48%)**, followed by the **gastrointestinal tract (12%)** and **skin (6%)**.
- **PBL may be the initial manifestation of HIV infection in 7% of cases** and frequently presents at an **advanced stage (65%)**.
- Pathogenesis: **EBV infection and MYC gene (Figure 2D) rearrangements**
- **Spontaneous tumor lysis syndrome (sTLS)** and **hypercalcemia** are **exceptionally rare complications** of PBL
- **Dose-adjusted EPOCH** is commonly used for treatment
- **Prognosis is poor** with a **median overall survival of 11 months**.

CONCLUSION: KEY LEARNING POINTS

- **Plasmablastic lymphoma (PBL)** may be the **initial manifestation of undiagnosed HIV infection**
- Rarely present with **spontaneous tumor lysis syndrome and hypercalcemia**.
- This case highlights the **aggressive nature of HIV-associated PBL** and the importance of **early HIV screening in high-risk populations**.
- Prompt initiation of **antiretroviral therapy, chemotherapy, and metabolic management** is critical, particularly in **resource-limited or safety-net settings**.