Refractory EBV-Positive Burkitt Lymphoma Successfully Bridged to Haploidentical Allogeneic Stem Cell Transplantation with Obinutuzumab, Glofitamab, and Polatuzumab: A Case Report

Esra HANEDAR, Pervin TOPÇUOĞLU

Ankara University, School of Medicine, Department of Hematology

ABSTRACT

Burkitt lymphoma is an aggressive mature B-cell lymphoma. Although response rates to first-line therapy are generally high, a subset of patients may experience primary refractory disease or relapse. The prognosis in this patient population is poor, and there is no established standard treatment approach; therefore, allogeneic stem cell transplantation is generally recommended. Achieving disease control with salvage therapy prior to allogeneic transplantation is crucial. However, as the efficacy of available salvage regimens remains limited, there is no universally accepted standard salvage treatment. Therefore, novel therapeutic approaches are needed for this challenging patient population.

CASE PRESENTATION

A 23-old female patient presented with a rapidly enlarging right axillary mass and was diagnosed with Epstein–Barr virus (EBV)-positive Burkitt lymphoma on May 27, 2025. Pathological evaluation demonstrated MYC/IGH translocation and a Ki-67 proliferation index of 100%. At admission to our clinic, the patient had an approximately 20 cm hard mass extending from the right axilla to the neck, accompanied by wrist drop deformity secondary to brachial plexus compression. PET/CT performed on June 2, 2025 revealed a 166×123 mm hypermetabolic right axillary mass (SUVmax 21.6). Thoracoabdominal CT demonstrated a 17×14 cm cystic-necrotic mass encasing the subclavian artery and compressing the subclavian vein. Baseline EBV DNA level was 20,000 copies/mL.

The patient was diagnosed with high-risk stage III EBV-positive Burkitt lymphoma and treatment with R-CODOX-M/R-IVAC protocol was initiated on June 4, 2025.(1) Interim PET/CT after the first cycle demonstrated partial metabolic response. However, following completion of the second cycle, rapid nodal regrowth occurred. PET/CT on September 30, 2025 demonstrated progressive disease with extensive involvement of the right axillary region (SUVmax 23.9), right supraclavicular area (SUVmax 18.8), liver, and skeletal system, consistent with stage IV primary refractory Burkitt lymphoma.

Salvage treatment with R-GDP was initiated, but lymph nodes continued to enlarge by day 8. As no standard treatment exists for primary refractory Burkitt lymphoma, a combination of obinutuzumab, glofitamab, and polatuzumab was planned based on published case reports.(2) During drug procurement, the disease progressed aggressively with diffuse bone pain refractory to narcotic analgesics and a marked increase in EBV DNA to 4,600,000 copies/mL. High-dose steroids, vincristine, cyclophosphamide, and daunorubicin were administered for temporary disease control. Palliative radiotherapy was initiated but discontinued because of severe pain.

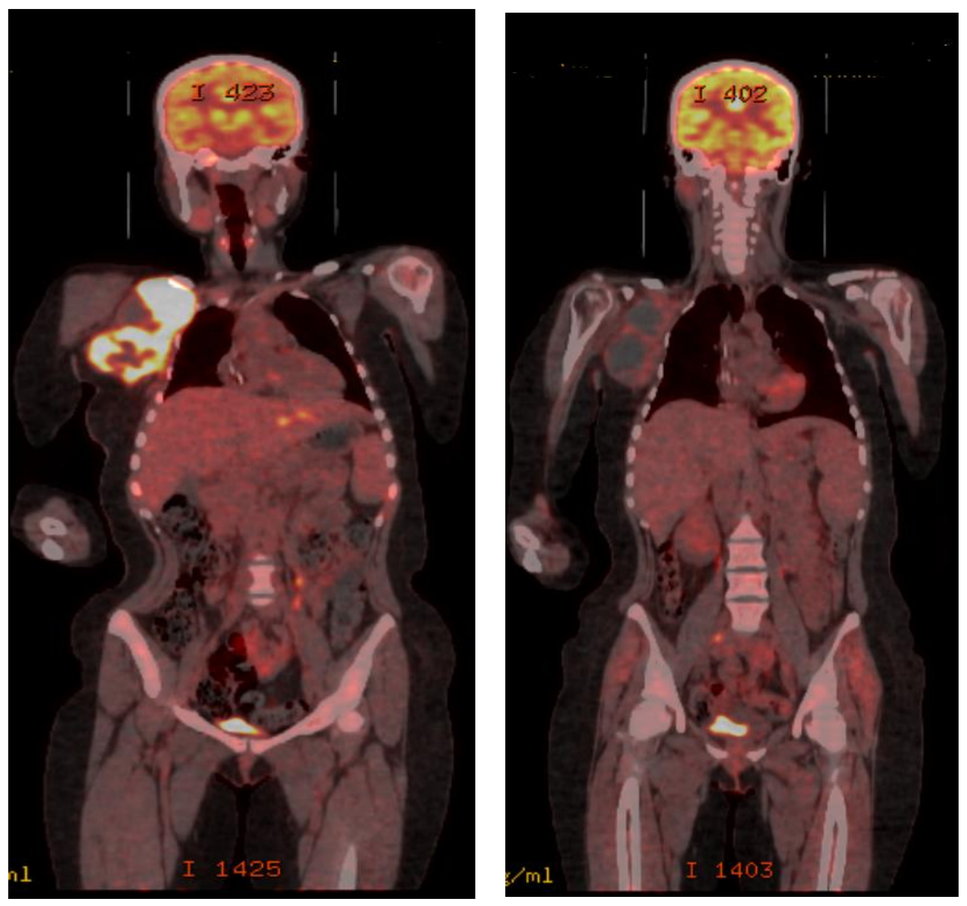

Fig1a. pre-treatment FDG-PET imaging; 1b. post-treatment FDG-PET imaging

Obinutuzumab was administered on October 31, 2025, followed by polatuzumab on day +4 and glofitamab on day +8. Tumor shrinkage and significant improvement in bone pain were observed by day +9. After the second glofitamab dose on November 14, 2025, EBV DNA decreased to 160,902 copies/mL. PET/CT performed on December 9, 2025 demonstrated marked metabolic response with right axillary SUVmax decreasing to 2.8 (Deauville score 3).
The patient subsequently underwent haploidentical allogeneic hematopoietic stem cell transplantation from a 5/10 HLA-matched brother on December 30, 2025 using a thiotepa, fludarabine, and busulfan conditioning regimen.(3). Neutrophil engraftment occurred on day +16, and complete donor chimerism was confirmed on day +41. Post-transplant PET/CT was consistant with remission. Post-transplant complications included grade 1-2 acute cutaneous graft-versus-host disease, methicillin-resistant *Staphylococcus epidermidis* catheter infection, BK virus-associated hemorrhagic cystitis, and thrombotic microangiopathy-like syndrome.
On day +88 post-transplantation, relapse developed with left lacrimal gland involvement and pulmonary lesions demonstrated on PET/CT. External radiotherapy and IR^2 (ibrutinib-lenalidomid-rituximab) protocol were initiated (3), immunsupression treatment was diminished. Because CAR-T therapy was not accessible under local healthcare conditions and all standard and experimental options had been exhausted, supportive care was continued. Progressive severe skin manifestations for graft-versus-host disease versus was developed. The patient died in the intensive care unit on May 9, 2026.

CONCLUSION

This case demonstrates that obinutuzumab, glofitamab, and polatuzumab may provide meaningful disease control and bridge-to-transplant potential in highly aggressive primary refractory EBV-positive Burkitt lymphoma.

REFERENCES

1. Mead, G.M., et al. An international evaluation of CODOX-M and CODOX-M alternating with IVAC in adult Burkitt's lymphoma: results of United Kingdom Lymphoma Group LY06 study. Ann Oncol, 2002. 13(8): p. 1264-74

2. Prica A, Roschewski M, Beale P, Pittaluga S, Delabie J, Ortega C, et al. Glofitamab with polatuzumab vedotin in refractory Burkitt’s lymphoma. N Engl J Med. 2025;392:1760–2.

3. Corrado Tarella et al. Long-Term Outcomes After Allogeneic Hematopoietic Stem Cell Transplantation in Relapsed/Refractory B-Cell Non-Hodgkin Lymphoma: An Italian Multicenter Collaborative Study, Transplantation and Cellular Therapy, Volume 31, Issue 10, 2025, Pages 806.e1-806.e19, ISSN 2666-6367, https://doi.org/10.1016/j.jtct.2025.06.004.

4. Koyun D, Şahin U, Gökmen A, Özcan M. Real-World Efficacy and Safety of the Combination of Rituximab, Lenalidomide, and Ibrutinib in Patients with Relapsed and/or Refractory Non-Hodgkin Lymphoma. Indian J Hematol Blood Transfus. 2025 Jul;41(3):511-518. doi: 10.1007/s12288-024-01897-6. Epub 2024 Oct 3. PMID: 40687457; PMCID: PMC12267787.

CONTACT

Esra Hanedar, MD., Ankara University, Dept. of Hematology, dr.esrahanedar@gmail.com