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ORAL ABSTRACTS

627.AGGRESSIVE LYMPHOMAS: CLINICAL AND EPIDEMIOLOGICAL

Management and Outcomes for Primary Mediastinal B-Cell Lymphoma Patients with Partial Metabolic Response

David Hodgson, MD[1], Mahmood Aminilari, PhD[1], Donna Liao, MD[2], Xiang Y Ye, PhD[3], Ur Metser, MD FRCPC[4], Michael Crump, MD[5], John Kuruvilla, MD[1], Abi Vijenthira, MDMS[6], Vishal Kukreti, MDFRCP,MSc[6], Robert Kridel[7], Richard Tsang, MD[8], Sita D. Bhella, MD MSc[9], Danielle Rodin, MD[1], Anca Prica, MDMSc[6]

[1] Princess Margaret Cancer Centre, Toronto, Canada
[2] Department of Radiation Oncology, University of Toronto, Toronto, Canada
[3] Biostatistics, Princess Margaret Cancer Centre, Toronto, Canada
[4] Department of Medical Imaging, University Health Network Princess Margaret Hospital, Toronto, Canada
[5] Department of Medical Oncology and Hematology, Princess Margaret Cancer Centre, Toronro, CAN
[6] Division of Medical Oncology and Hematology, Princess Margaret Cancer Centre - University Health Network, Toronto, Canada
[7] Princess Margaret Cancer Centre, University Health Network, Toronto, Canada
[8] Princess Margaret Hospital, Toronto, CAN
[9] Division of Medical Oncology and Hematology, Princess Margaret Cancer Centre - University Health Network, Toronto, Canada

Background: The optimal management of patients with primary mediastinal B-cell lymphoma (PMBCL) who experience a partial metabolic response (PMR) on FDG-PET after initial systemic therapy is unclear. This study aimed to investigate different management strategies and outcomes for PMBCL patients who achieved PMR following primary systemic therapy, utilizing a single-center retrospective design.
Methods: We reviewed the electronic medical records of 121 PMBCL patients who underwent post-chemotherapy PET scans at the Princess Margaret Cancer Center, Toronto, from January 2009 to September 2021. Using Modified Lugano criteria (2014), post-chemotherapy PET scan results were evaluated, with Deauville score (DS) 0-3 considered a complete metabolic response. Demographic, clinical, and imaging characteristics of the PMBCL population were analyzed. The Kaplan-Meier method was used to estimate progression-free survival (PFS), measured from the time of the post-systemic therapy PET.
Results: A total of 121 patients with PMBCL underwent post-chemotherapy PET scans. Among them, 49 patients (40%) demonstrated incomplete metabolic response (DS4-5) Among these 49 patients, 12 showed primary refractory disease, while 37 demonstrated a partial metabolic response (PMR, DS4). The median age at diagnosis of the 37 patients with PMR was 30.8 years (range:18.4 - 52.8 years), and 20 (54%) were female. The median length of follow-up for these patients was 3.7 years (range: 0.4 to 9.2 years). Most PMR patients were stage I/II (26 patients, 70.3%), while the remaining were stage III (2 patients, 5.4%), or stage IV (8 patients, 21.6%), and 26 (70.3%) had a large mediastinal mass (maximum diameter exceeding 10cm). Initial systemic treatment was R-CHOP-21 (34 patients, 91.9%), R-CHOP combined with dose-adjusted R-EPOCH (2 patients, 5.4%), and dose-adjusted EPOCH (1 patient, 2.7%). Thirty one patients (83.8%) received 6 cycles.
Following treatment strategies were employed to manage PMR: 1) radiation therapy (RT) only with or without biopsy in 30 patients (80.1%); 2) an observational approach (repeating PET scans without immediate treatment) in 3 patients (8.1%); 3) salvage chemotherapy in 3 patients (8.1%) and other approach in 1(2.7%) patient.
The 2-year progression-free survival (PFS) rate for all patients with incomplete metabolic response (n=49) was 74.5% (95% CI = 62.5% to 88.9%). For patients with primary progression on post-chemotherapy PET scans the 2-year PFS (ie free of 2nd progression) was 40% (18.7% to 85.5%), while the 2-year PFS for patients with PMR was 85.4% (74.3% to 98.1%). PMR patients who underwent radiotherapy (RT) had the 2-year PFS rate of 92.7% (95% CI: 83.5% to 100.0%). No progression or relapsed occurred among the 3 patients with PMR who were managed with repeating PET scans without immediate further treatment.
Conclusion: This study replicates prior work demonstrating a higher rate of incomplete metabolic response for PMBCL patients following R-CHOP-21 than typically reported for DLBCL. RT to persistent PET-avid sites is associated with excellent PFS. The favorable outcome of PMR patients without any additional treatment illustrates the non-trivial risk of false-positive PET

scans following systemic therapy, and the need to identify criteria that can distinguish those who need additional treatment from those who can be safely observed.

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