TREATMENT OPTIONS IN PERIPHERAL T-CELL LYMPHOMAS

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T-cell lymphomas are a complex group of lymphoid malignancies comprising less than 10% of all cases of non-Hodgkin's lymphoma.

Peripheral T-cell lymphoma (PTCL) are the most frequently encountered. The prognosis of PTCL patients is poor, because they are usually unresponsive to standard chemotherapy regimens. Because of the rarity of the condition there is a lack of prospective, randomized clinical studies comparing chemotherapy regimens exclusively in PTCL patients. As a result, there is no standard therapy for PTCL; that is why the NCCN guidelines recommend clinical trials as the preferred treatment option for patients with this malignancy.

Frontline therapy- CHOP is the most frequently used chemotherapy regimen for the frontline therapy of PTCL, but except for the anaplastic lymphoma kinase (ALK)–positive anaplastic large cell lymphoma (ALCL) subtype of PTCL, most patients do not respond well to CHOP therapy. Association of etoposide improved outcome in PTCL patients as demostrated by the Nordic Lymphoma Group. Because of the poor response to conventional chemotherapy, consolidation therapy with high-dose chemotherapy and autologous stem cell rescue (HDT/ASCR) has been considered as an option for frontline therapy. After completion of frontline therapy, all patients should be restaged and their options for further treatment should be judged according to the initial stage at which the patient presented, the treatment result as well as their ability to undergo HDT/ASCR. Treatment for relapsed/refractory PTCL comprises several combination chemotherapy regimens (DHAP, ESHAP, GDP, GemOx, ICE, MINE), used for treatment in patients who are candidates for consolidation therapy with HDT/ASCR. In the last years, several drugs were also used as single agent therapy for relapsed/refractory PTCL: Pralatrexate,(a folate analogue metabolic inhibitor), romidepsin (a histone deacetylase inhibitor), cyclosporine (only for the treatment of angioimmunoblastic T-cell lymphoma (AITL)), denileukin diftitox and bortezomib

Further studies are ongoing for several molecules such as the histone deacetylase inhibitors panobinostat and belinostat, the nucleoside analogue nelarabine,, immuno-modulatory agents - thalidomide and lenalidomide and monoclonal antibodies - CD52 alemtuzumab, CD4 zanolimumab. Brentuximab vedotin (SGN-35). Also some combinations such as an intensified alemtuzumab- cyclophosphamide /doxorubicin/ vincristine /prednisone regimen or bortezomib used with cyclophosphamide/ doxorubicin/ vincristine/ prednisone are studied in clinical trials with promising results.

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