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AUTOLOGOUS OR ALLOGENEIC HEMATOPOIETIC CELL TRANSPLANTATION FOR PERIPHERAL T-CELL LYMPHOMA-NOT OTHERWISE SPECIFIED AND ANGIOIMMUNOBLASTIC T-CELL LYMPHOMA FAILING FIRST-LINE THERAPY

Topic: 22. Stem cell transplantation - Clinical

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Background: Management of the patients with peripheral T-cell lymphoma-not otherwise specified (PTCL-NOS) and angioimmunoblastic T-cell lymphoma (AITL) who failed first-line therapy is a difficult challenge. Salvage chemotherapy followed by autologous hematopoietic cell transplantation (auto-HCT) or allogeneic HCT (allo-HCT) represents the treatment of choice for appropriate candidates. However, there is no consensus on which type of HCT should be applied for such patients.

Aims: To evaluate the impact of auto- or allo-HCT on outcome in PTCL-NOS and AITL failing first-line therapy.

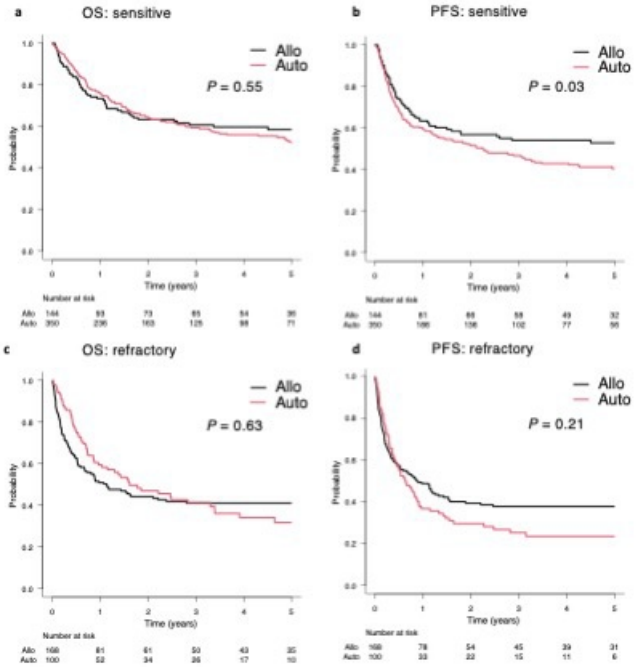
Methods: We performed a retrospective analysis using registry data from the Japan Society for Hematopoietic Cell Transplantation. Adult patients who underwent a first HCT after 2, 3, or 4 lines of therapy ––which means first-line therapy failed for some reason–– between 2006 and 2018 were included.

Results: A total of 762 patients with PTCL-NOS (n = 449) and AITL (n = 313) undergoing auto-HCT (n = 450) or allo-HCT (n = 312) as their first HCT were analyzed. Among them, 494 were chemo-sensitive (172 were first complete-remission, 112 were first partial-remission, and 210 were relapsed-sensitive) and 268 were chemo-refractory (142 were primary-refractory and 126 were relapsed-refractory). The allo-HCT recipients were more likely younger (median ages, 53 vs 58 years; $P < 0.001$), received more than 2 lines of therapy prior to HCT (63% vs 33%; $P < 0.001$), with higher HCT-comorbidity index ($P < 0.001$) and with worse performance status ($P < 0.001$) compared with the auto-HCT recipients. The time from the diagnosis to auto-HCT and allo-HCT were 11 months (range = 2-214) and 11 months (range = 2-154) ($P = 0.64$), respectively. The median follow-up duration for survivors of auto-HCT and allo-HCT were 36 months (range = 1-150) and 54 months (range = 3-160), respectively. For chemo-sensitive patients, the 4-year overall survival (OS) of auto-HCT and allo-HCT recipients were 56% (95% CI: 49.9-61.7) and 59.8% (95% CI: 50.8-67.8), and the 4-year progression-free survival (PFS) of both groups were 43% (95% CI: 37.2-48.6) and 54.2% (45.2-62.2), respectively (Figure). For chemo-refractory patients, the 4-year OS of auto-HCT and allo-HCT were 34.1% (95% CI: 23.5-44.9) and 41.1% (95% CI: 33.4-48.7), and 4-year PFS of both

groups were 23.4% (95% CI: 14.9-33) and 37.8% (95% CI: 30.2-45.2), respectively (Figure). The 2-year non-relapse mortality of auto-HCT and allo-HCT recipients with chemo-sensitive disease were 9.7% (95% CI: 6.7-13.3) and 23.3% (95% CI: 16.6-30.7), while those with chemo-refractory disease were 9.7% (95% CI: 4.7-16.8) and 36.3% (95% CI: 29-43.7), respectively. In the multivariable cox analysis, allo-HCT was a significantly better prognostic factor for PFS in chemo-sensitive patients (hazard ratio [HR], 0.68; 95% CI: 0.5-0.92; $P = 0.01$), and marginally better for PFS in.chemo-refractory patients (HR, 0.73; 95% CI: 0.52-1.01; $P = 0.06$). The subgroup analyses suggested that allo-HCT tended to be associated with better OS for relapsed-sensitive disease (HR 0.61; 95% CI: 0.36-1.04; $P = 0.07$) among chemo-sensitive patients, and primary-refractory disease (HR 0.51; 95% CI: 0.29-0.89; $P = 0.02$) among chemo-refractory patients.

Image:

Figure Auto- vs Allo-HCT on outcomes stratified with chemo-sensitivity



Summary/Conclusion: These data showed allo-HCT for PTCL-NOS and AITL failing first-line therapy can result in comparable survival outcomes despite being with more unfavorable factors compared with auto-HCT. Patients with relapsed-sensitive and primary-refractory disease may be a good candidate for allo-HCT if suitable donor is available.

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