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Autologous versus allogeneic hematopoietic stem cell transplantation (SCT) for peripheral T-cell lymphomas (PTCLs): Japan and Korea cooperative study with pathological central review

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Background: To evaluate the role of auto- and allo-SCT in the treatment of PTCLs, Japan Study Group for Cell Therapy and Transplantation conducted a multicenter retrospective survey in Japan and Korea.

Methods: After excluding patients with ATLL and NK-cell tumors, patient data were newly collected from 330 patients who underwent SCT between 9/1991 and 12/2008. By pathological central review, 232 patients (135 autologous and 97 allogeneic including 26 patients with previous autograft) were eligible. There were 103 (44%) patients with PTCL-NOS, 67 (29%) with AITL, 28 (12%) with ALCL (18 ALK-negative, 7 positive and 3 unknown), and others. Allo-SCT (37 BM, 44 PB, 1 BM+PB, 15 CB) was performed using a RIC in 59 patients (61%). The disease status at transplant in the allo-group was significantly worse than that in the auto-group.

Results: The NRM in the auto-group was significantly lower than that in the allo-group (P<0.0001). Grade II-IV acute GVHD occurred in 40% of the patients after allo-SCT. The long-term relapse rate in the auto-group was significantly higher than that in the allo-group (P=0.03). Early survival rate after transplant was significantly better for auto-group than allo-group (P=0.001), but the difference was marginal in the total course (P=0.06). Multivariate analyses showed that the risks of survival were age (>50 years), performance status at transplant (>1), stage at transplant (III-IV), but not transplant type (auto- versus allo-group). The survival of the patients with any disease status at transplant did not plateau in the auto-group, but the survival of the patients with CR1/PR1 and resistant relapse at transplant plateaued after day 250 in the allo-group (68% and 40%, respectively).

Conclusions: Despite a worse disease status at transplant in the allo-group, the overall survival was comparable to that in the auto-group. This supports the notion that early allo-SCT is a valuable treatment option for PTCLs.