

Fluctuation of HTLV-1 provirus loads in long survival patients with ATL underwent allogeneic hematopoietic cell transplantation

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Background:

ATL is aggressive T-cell malignancy caused by HTLV-1. Prognoses of patients with aggressive ATL have been improved by allogeneic hematopoietic cell transplantation (allo-HCT). However, many patients with ATL relapse after allo-HCT. In order to clarify the relationship between HTLV-1 provirus loads in PB (PVLs) and relapse, we performed retrospective analysis of ATL patients underwent allo-HCT.

Methods:

ATL patients who underwent allo-HCT between January 2002 and December 2019, and survived more than 1 year were analysed. PVLs were measured once a year at the University of Tokyo as JSPFAD study.

Results:

Thirty-four patients consisted of 19 males and 15 females. Median age of the patients was 54 years (37-75). Clinical subtypes of ATL were 25 acute, 5 lymphomatous and 4 poor prognostic chronic. Median number of examinations of PVLs was 3.5 times (2-11), and median time to measurement of PVLs from allo-HCT was 1207 days (417-3927). In twenty-seven patients with more than two measurements of PVL (27/34), PVLs were maintained below 1 copy/100 PBMC at any time of examinations. In the remaining 7 patients, PVL showed more than 1 copy/100 PBMC at least one measurement during the follow-up period. Twelve patients relapsed after allo-HCT. In 5 out of them, PVLs were measured at least once (≥ 1 copy/100 PBMC). On the other hand, PVL showed more than 1 copy/100 PBMC in only two patients out of 22 without relapse after allo-HCT. One of them eventually developed HAM/TSP after allo-HCT, and showed a gradual increase during the observation period.

Conclusion:

The level of PVLs in long survivors of ATL underwent allo-HCT was generally low. About one third of patients relapsed nevertheless low PVL level in PB. Measurement of PVLs in ATL patients underwent allo-HCT was relatively useful for prediction of relapse.

Disclosure of Interest Statement:

There are no disclosures.