Efficacy and safety of brentuximab vedotin in adult T-cell leukemia/lymphoma

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Background

Brentuximab vedotin (BV) is a molecularly targeted drug consisting of a monoclonal antibody against CD30 conjugated with the microtubule inhibitor monomethyl auristatin E. So far, the reports on the efficacy and safety of BV for adult T-cell leukemia/lymphoma (ATL) are limited.

Methods

We retrospectively analyzed the clinical characteristics of 10 patients (5 males, 5 females) with ATL who received BV between March 2020 and March 2021 in our institute.

Results

The median survival after initiation of BV was 222 days (15-953), with a median age of 70 years (56-92). The ATL lesions included 8 lymph nodes, 4 PB, 3 skin, 2 CNS, and 1 lung, and 2 patients had hypercalcemia. The median percentage of CD30 expression in diseased tissues, including lymph nodes, was 20% (0-100), and the median percentage of CD30 expression in abnormal lymphocytes in PB was 27.7% (6.6-78.9). The stage of disease at the time of BV use was PD in all patients. The best response was observed in 3 patients with CR, 4 PR, 1 SD, and 2 PD, and the median time from the start of BV to the determination of best effect was 29 days (8-120). More efficacy was observed in patients with pathological CD30 expression rates of 95% or higher and in ALCL-like patients. Two mogamulizumab-refractory patients showed resolution of PB lesions, while another patient with a high CD30 positive rate of just under 80% showed no effect. Three patients underwent allogeneic transplantation, one for pre-transplant use, one for post-transplant relapse, and one for both. Grade 4

neutropenia was observed in 6 patients, and sepsis and death due to FN were observed in 3 patients.

Conclusion

The use of BV for ATL seems to be a promising treatment, with 70% efficacy over PR, but caution should be exercised against strong hematologic toxicity.

Disclosure of Interest Statement:

Nothing to disclose.