Modified anthracycline-based chemotherapy for elderly patients with diffuse large B-cell lymphoma in the rituximab era

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Abstract: Objective. Although R-CHOP therapy (rituximab, cyclophosphamide, doxorubicin, vincristine, and prednisone) is reported to improve the prognosis of elderly patients with diffuse large B-cell lymphoma (DLBCL), the influence of dose reduction on the outcome remains unclear. Methods. We retrospectively studied to evaluate the influence. Patients. We surveyed 80 patients aged 70 years or older with newly diagnosed DLBCL who were treated with R-CHOP or CHOP-like chemotherapy. Results. The median follow-up time was 2.2 years. Seventeen patients were scheduled to receive reduced-dose chemotherapy. They were older than the patients who received standard-dose chemotherapy, but there was no significant difference of 2-year overall survival or progression-free survival between the two groups. B symptoms and older age (≥74 years) were factors with an independent influence on progression-free survival according to multivariate analysis. Conclusion. Reduced-dose R-CHOP therapy may be comparable to standard-dose therapy for some elderly patients because avoiding severe toxicity allows scheduled delivery of chemotherapy.

Key words: Elderly patient, Diffuse large B-cell lymphoma, Dose reduction, R-CHOP therapy

Introduction

Diffuse large B-cell lymphoma (DLBCL) is one of the most common types of non-Hodgkin's lymphoma and about 30% of DLBCL patients are over 70 years old1). It is widely accepted that R-CHOP (rituximab, cyclophosphamide, doxorubicin, vincristine, and prednisone) is the standard therapy for elderly patients with advanced DLBCL2). However, it often difficult for elderly patients to receive this therapy as scheduled due to poor performance status and significant toxicity associated with comorbidities, so they are sometimes treated with a reduced-dose regimen. In the pre-rituximab era, Lee et al. retrospectively analyzed 195 elderly patients with DLBCL who received doxorubicin-based regimens and concluded that maintaining the dose intensity of doxorubicin was associated with a better prognosis3). In the rituximab era, there have been some reports about dose reduction of CHOP therapy in elderly patients, including a clinical trial4) and a retrospective database survey of anthracycline-based chemotherapy5). However, the usefulness of dose reduction for this elderly population with DLBCL is still controversial. Accordingly, we retrospectively surveyed elderly patients treated with R-CHOP or CHOP-like chemotherapy to ascertain the efficacy of reduced-dose therapy and to identify unique prognostic factors of elderly patients with DLBCL.

Patients and methods

We extracted patients aged 70 years or older with newly