

Subsequent Malignant Neoplasms Among Children and Adolescents with Hodgkin Lymphoma Treated with Response-Adapted Therapy: A Report from the Children's Oncology Group Study AHOD0031

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Introduction

Survivors of Hodgkin lymphoma (HL) have an increased risk of subsequent malignant neoplasms (SMNs). Response-adapted treatment may decrease this risk by reducing exposure to therapy associated with SMN risk. The Children's Oncology Group Study AHOD0031 evaluated response-adapted therapy for children and adolescents with intermediate-risk HL. We report the SMNs among 1,711 patients enrolled on AHOD0031.

Methods

Patients were treated with four cycles of doxorubicin, bleomycin, vincristine, etoposide, prednisone, and cyclophosphamide with or without involved field radiation therapy (RT). Patients with a slow early response to initial chemotherapy were randomized to two additional cycles of dexamethasone, etoposide, cisplatin and cytarabine or no additional therapy. At a median follow up of 7.3 years, an analysis of SMNs was performed.

Results

The 5-year cumulative incidence of SMN was 0.47%. SMNs included 3 patients with AML, 11 with solid tumors, and 3 with lymphoma. The standardized incidence ratio for SMN was 9.49 with an excess absolute risk of 1.23 per 1,000 person-years. The cumulative incidence of SMNs was higher among patients who received RT ($p=0.037$). In multivariate analysis, RT, B-symptoms, and race were associated with risk for SMNs.

Conclusion

The incidence of SMNs in this cohort is low. Given the latency from exposure, we have likely captured all cases of secondary leukemia. Longer follow-up is needed to determine the risk of solid tumors. Avoidance of RT without sacrificing disease control should remain a goal for future therapeutic approaches. Patients

treated according to this strategy are expected to be at lower risk of SMN.

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