Lymphoma

Long-term cause-specific mortality in hodgkin lymphoma patients

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BACKGROUND

Few studies examined the impact of treatment-related morbidity on long-term cause-specific mortality in Hodgkin lymphoma (HL) patients.

METHODS

This multicenter cohort included 4,919 HL patients, treated before age 51 between 1965-2000, with a median follow-up of 20.2 years. Standardised mortality ratios (SMRs), absolute excess mortality per 10,000 person-years (AEM) and cause-specific cumulative mortality by stage and primary treatment, accounting for competing risks were calculated.

RESULTS

HL patients experienced 5.1-fold (AEM = 123 excess deaths per 10,000 person-years) higher risk of death due to causes other than HL. This risk remained increased in 40-year survivors (SMR = 5.2, 95% Confidence Interval (95%CI) = 4.2-6.5; AEM = 619). At age 54 years, HL survivors experienced similar cumulative mortality (20.0%) from causes other than HL as 71-year old individuals from the general population. While HL mortality statistically significantly decreased over calendar period ($p < .001$), solid tumour mortality did not change in the most recent treatment era. Patients treated in 1989-2000 had lower 25-year cardiovascular disease mortality than patients treated in 1965-1976 (4.3% vs. 5.7%; sub-distribution Hazard Ratio (HR) = 0.65, 95%CI = 0.46-0.93). Infectious disease mortality was not only increased after splenectomy but also after spleen irradiation (HR = 2.81, 95%CI = 1.55-5.07). For stage I-II, primary treatment with chemotherapy alone was associated with statistically significantly higher HL mortality ($p < .001$ for CT vs. RT; $p = .04$ for CT vs. RT+CT), but lower 30-year mortality from causes other than HL (15.8%, 95%CI = 9.7%-23.3%), compared to radiotherapy alone (36.9%, 95%CI = 34.0%-39.8%; $p = .001$) and radiotherapy and chemotherapy combined (29.8%, 95%CI = 26.8%-32.9%; $p = .02$).

CONCLUSION

Compared to the general population, HL survivors have a substantially reduced life expectancy. Optimal selection of patients for primary CT is crucial, weighing risks of HL relapse and long-term toxicity.