

Treatment Outcome of Extragonadal Germ Cell Tumors

Introduction and Objective: Extragonadal germ cell tumors (EGGCT) are extremely rare. Although multimodality treatment has improved the prognosis of patients with EGGCT, few findings are available for these tumors. We therefore performed a retrospective analysis of patients with EGGCT.

Material and Methods: The medical records of 34 patients of EGGCT were retrospectively examined. All patients underwent initial treatment at our institution between January 1982 and January 2010. An EGGCT was defined as a germ cell tumor arising in the mediastinum, retroperitoneum, or other site without demonstrable testicular abnormal findings by physical examination or ultrasonography. Actuarial survival curves were calculated according to the Kaplan-Meier method. Relationships between survival rates and individual factors were examined using the log-rank test. Probability values of <0.05 were considered significant.

Results: The median duration of follow-up after the diagnosis was 48 months (range 2-350 months). Twenty-six patients (76%) had nonseminomatous EGGCT, and eight patients (24%) had seminomatous histology. Surgical procedures were performed in five patients (15%) as induction treatment. Twenty-nine patients (85%) had received cisplatin-containing regimen as induction therapy. Twenty-three patients underwent post-chemotherapy surgery, and 14 of them (60%) had residual viable malignant cells. Survival analysis by histologic type shows that seminomatous EGGCT patients have a much better survival rate than nonseminomatous EGGCT patients ($p=0.009$). Patients who achieved CR or PRm- after induction chemotherapy had better outcomes than those who could not obtain CR or PRm-. Twenty of 34 patients (59%) were alive without disease, and 13 patients with nonseminomatous histology died of disease progression. The overall 10-year survival rate for all patients was 53%.

Conclusions: Nonseminomatous histology and resistance to cisplatin were found to be negative prognostic factors.