

Outcomes and Prognostic Factors of 251 Patients with Minimally Invasive Follicular Thyroid Carcinoma

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Background: Radioiodine ablation after total thyroidectomy is the generally accepted treatment for patients with widely invasive follicular thyroid carcinoma (FTC). The therapeutic strategy for minimally invasive FTC, on the other hand, is still a matter of controversy. The histological diagnosis of minimally invasive FTC is often made after lobectomy. The aim of this study was to determine the factors associated with the development of distant metastases in patients with minimally invasive FTC.

Methods: Between 1989 and 2006, 251 patients with minimally invasive FTC underwent initial surgery at our hospital. Their median follow-up period was 7.2 years. There were 194 women and 57 men. Their mean age at the time of surgery was 46 years. Distant metastases were diagnosed in 54 patients (21.5%). In 22 of them distant metastases were diagnosed at the time of the initial surgery (M1), and in the other 32 they were diagnosed during the follow-up period. Age at initial surgery, sex, primary tumor size, histological findings (differentiation, and extent of vascular and capsular invasion), completion total thyroidectomy, and distant metastases at initial surgery were assessed as prognostic factors for distant-metastases-free survival (DMFS) and cause-specific survival (CSS). The Kaplan–Meier method and log-rank test were used to analyze time-dependent variables. The Cox proportional hazard model was used to perform the multivariate analysis.

Results: Univariate analysis showed that age (45 years or older) and primary tumor size (4 cm or more) were significant prognostic factors related to postoperative distant metastases in the group of 229 patients without distant metastases at time of the initial surgery. The cumulative survival rate was significantly poorer in M1 patients, patients aged 45 years or older, and patients whose primary tumor size was 4 cm or more. Multivariate analysis showed that age was a significant prognostic factor both for DMFS and CSS.

Conclusions: Age was the most powerful prognostic factor for patients with minimally invasive follicular thyroid cancer. The prognoses of patients younger than 45 years old were excellent and distant metastases rarely occurred. Routine completion total thyroidectomy and radioiodine ablation is thought unnecessary for these patients.