

Differentiated Thyroid Carcinoma in Patients Less than 20 Years of Age at Diagnosis : Clinicopathologic Characteristics and Prognostic Factors

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Purpose : The aim of this study was to investigate the clinicopathologic characteristics and prognostic factors in young patients with differentiated thyroid carcinoma.

Methods : Among 3,837 patients with DTC who were treated in the Department of Surgery at Yonsei University College of Medicine from March 1986 to March 2005, 71 patients were identified who were less than 20 years of age at diagnosis. The mean age was 14.9 years (range, 4–20 years). There were 59 females and 12 males with a mean follow-up period of 91.8 months (range, 14–205months)

Results : The cause specific and the progression-free survivals at 10 years were 100% and 80.3%, respectively. Eleven patients (15%) experienced a recurrence of their thyroid carcinoma and 1 patient showed a progression of pulmonary metastasis at diagnosis. Compared with 39 patients

with age >15, 32 patients with <15 years of age tended to have higher incidence of N1b and M1 stage, and lower progression-free survival rate. Univariate analysis revealed that age <15 years, multicentricity, N1b stage, M1 stage, and bilateral radical neck dissection had a negative impact on progression-free survival. However, multivariate analysis showed that age at diagnosis and M1 stage were independent prognostic factors for progression-free survival.

Conclusions : Age less than 15 years and M1 stage are the most significant prognostic factors negatively influencing progression-free survival. Total thyroidectomy and modified radical neck dissection, followed by postoperative ¹³¹I therapy seem to be justified even in patients with <15 years of age because of the high incidence of lateral neck and lung metastasis.