

Session 3.3

Childhood Thyroid Cancer in Korea

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Thyroid cancer has become the most common cancer in Korea since 2009. Its annual incidence has been abruptly increasing from 5,299 in 2002 to 36,021 in 2010 in Korea. Its annual increment was approximately 24% compared to 3.3% of other common malignancies. The contribution of genetic factors to the pathogenesis of thyroid cancer was reported to be highest among all malignancies, and populations in East Asia including Korea were known to be genetically susceptible to thyroid cancer.

Thyroid cancer is a rare malignancy in childhood. Patients with childhood thyroid cancer have been reported to have favorable outcomes, although they present aggressive clinical features. Recently, the annual incidence of childhood (0-19 years) thyroid cancer has also been increasing in Korea from 80 in 2002 to 181 patients in 2010. Age-specific crude rate (CR), which was calculated by dividing the total number of patients in a given time period by the total number of persons with same ages in the population, was also increased from 0.60/100,000 in 2002 to 1.55/100,000 in 2010. Its increase was observed in both genders. It was the 5th-ranked malignancy followed after leukemia, brain tumor, lymphoma, and bone/connective tissue tumors. Its prevalence was CR 3.74/100,000 in 2010 (1.52 in boys and 6.17 in girls). According to childhood thyroid cancer data provided by Korean Health Insurance Review and Assessment Service, 9 (1.2%) of 762 patients with childhood thyroid cancer, who was detected between 2008 and 2012, already had other malignancies prior to the diagnosis of thyroid cancer.

One-hundred thirty-one patients with childhood thyroid cancer below 19 years were retrospectively reviewed to evaluate their clinical features. They underwent thyroidectomy at Samsung Medical Center between 1995 and 2013. Their median age was 17 years with a range from 8 to 19 years, and 113 girls (86%) was included. Nine patients (7%) had their family history of thyroid cancer in their first-degree relatives. It was found due to palpable neck mass in 90 patients (69%), ultrasonography screening in 16 patients (13%), and during follow-up of other diseases in 25 patients (19%). Six patients (4.6%) with other malignancies underwent radiation therapy and/or chemotherapy, which were detected prior to its diagnosis.