



Unfounded Reports on Thyroid Cancer

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The incidence of thyroid cancer is on the rise in Korea as well as in the rest of the world. This is mainly due to the early detection of papillary thyroid carcinoma (PTC) less than 1 cm in size with a high-resolution ultrasonography (USG). Why is its incidence abruptly increasing only in Korea? It is related to the unique Korean medical environment. People can easily visit any hospital and can undergo USG as desired at a cost of 30-50 US dollars. Most hospitals have strengthened their health promotion programs since 2002, and thyroid USG has become an optional or obligatory examination. However, the incidence of larger thyroid cancers is also on the rise, and the annual incidence of childhood thyroid cancer also increased 2.5-fold during the past 10 years in Korea. Many experts have emphasized that the early detection with USG cannot completely explain the observed increase in thyroid cancer. Therefore, other possible explanations should be explored. Many studies have suggested the major contribution of genetic factors to the pathogenesis of thyroid cancer, and that the population living in East Asia including Korea is genetically susceptible to thyroid cancer. Extremely high iodine intake, increased exposure to medical radiation, and rising rates of obesity are also potential candidates to explain this phenomenon.

Routine fine-needle aspiration is not recommended for thyroid nodules 0.5 cm or smaller according to the revised recommendations developed by the Korean Thyroid Association (KTA) in 2010 (1). This guideline was based on long-term follow-up observations (2). Mazzaferri and Sipos (3) emphasized that thyroid nodules 0.5 cm or smaller had a high rate of false-positive USG findings and often yielded inadequate cytology. They also suggested that periodic USG examination was likely to be a better option for such patients, since their small nodules might spontaneously disappear or remain unchanged. Most occult PTC incidentally found on autopsy was reported to be less than 0.5 cm in diameter. There is some debate regarding surgery as a treatment for PTC between 0.6 and 1.0 cm in size. Many physicians prefer surgery, because of its high recurrence rates, frequent lateral node metastasis and frequent distant metastasis. The Korean Thyroid Association also agreed to this policy in these patients (1). A large-scale population study revealed that total thyroidectomy decreased recurrence and increased sur-

vival rates for PTC greater than 1 cm in size compared to lobectomy.

First of all, it is important to understand the natural course of PTC after therapy. PTC typically exhibits unique behavior, so-called 'late recurrence and late death'. Two-thirds of recurrences occur within the first decade after initial therapy, but others may appear much later. The mortality rate slowly increases over the 30 years following initial therapy. Mazzaferri (4) emphasized that a long delay in initiating therapy has an adverse and independent effect on prognosis, more than doubling the 30-year cancer mortality rate. Cho et al. (5) also reported that the cumulative recurrence rate increased continuously, with rates of 18% at 10 years and 31% at 20 years. The cancer-specific cumulative mortality rate also increased, with rates of 1.4% at 10 years and 6% at 20 years. Therefore, survival should be evaluated 10 to 30 years after initial therapy instead of after 5 years.

Most thyroid cancer does not present with any signs or symptoms. When a cancer grows and puts pressure on neighboring organs, it invades surrounding tissues, and spreads to remote organs (the lung, bone, brain, and spine), patients start to complain of various symptoms. Therefore, symptomatic patients with thyroid cancer cannot achieve favorable outcomes because of their advanced disease stage.

Palpation of thyroid tumors is dependent on size and location, neck thickness, and physician experience. Physicians cannot detect more than half of thyroid tumors larger than 1 cm via palpation. Skilled physicians can palpate only 15% of thyroid tumors detected by USG. Five-year age-standardized survival rates for thyroid cancer diagnosed in England and Wales during 1971-1999 were very low compared to present Korean data (50%-60% in the 1970s, 59%-70% in the 1980s, 70%-79% in the 1990s vs. 100% in Korea). USG might not have been introduced in the diagnosis of thyroid cancer in the UK at that time.

Unnecessary diagnosis and excessive treatment should be avoided. If unreasonable, uniform regulations are applied, they could do more harm than good. In terms of screening efficacy, the National Evidence-based Healthcare Collaborating Agency (NECA) in conjunction with the Korean Thyroid Association concluded in 2013 that evidence was insufficient to recommend for or against USG screening for thyroid cancer. It is a basic right

that people check his or her health paying his money. If a patient incidentally finds a tumor on his or her thyroid, a physician should manage the patient according to evidence-based guidelines. Therapeutic guidelines should be developed based on evidence-based medical decisions for patients, not on economic efficacy.

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