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THYROID CANCER

Is active surveillance reasonable for low-risk papillary thyroid microcarcinomas?

BACKGROUND

Surgery is usually recommended for patients with thyroid cancer. However, it is becoming clear from recent studies that observation without surgery, known as active surveillance, could be considered for some patients with low risk small papillary thyroid cancers. The Kuma Hospital in Japan introduced active surveillance as an alternative to the standard thyroid surgery for low risk papillary thyroid microcarcinomas (cancers < 1 cm on ultrasound) in 1993. Accumulating evidence over years has revealed that there is a low rate of cancer progression during active surveillance, and surgery performed later when progression is noted is safe. The goal of this study was to evaluate the physician acceptance and implementation patterns of active surveillance at Kuma Hospital, as a model that could be used for other institutions around the world.

THE FULL ARTICLE TITLE

Ito Y et al 2018 Trends in the implementation of active surveillance for low-risk papillary thyroid microcarcinomas at Kuma Hospital: gradual increase and heterogeneity in the acceptance of this new management option. Thyroid 28:488–495. Epub 2018 Apr 2. PMID: 29608416.

SUMMARY OF THE STUDY

This is a study of 4023 patients who were diagnosed with a low-risk papillary thyroid microcarcinomas and followed at Kuma Hospital between 1993 and 2016. Low-risk papillary thyroid microcarcinomas were defined as measuring 1 cm or less by ultrasound without aggressive features noted on biopsy, without ultrasound evidence for spread to the cancer to lymph nodes in the neck and not located in an area close to the trachea or recurrent laryngeal nerve with the potential of invading these structures. All patients were informed and could choose between active surveillance and immediate surgery. Patients who chose active surveillance had annual neck ultrasounds to evaluate for cancer progression, defined as cancer growth of at least 3 mm or development of new lymph node metastases. Patients who showed cancer progression were recommended to undergo surgery.

The frequency of applying active surveillance initially increased significantly from 8% in 1993 to 63% in 1996, then it remained stable until 2007, when it started to increase again. There was a marked increase of up to 90% in the final period after 2014, when the first reports regarding the safety of active surveillance were published. There was a significant difference in the frequency of active surveillance use among surgeons, some surgeons recommending active surveillance in most patients during the entire period, while other surgeons performed surgery in most patients and adopted active surveillance only in the final period. Among surgeons, the active surveillance rate increased from 30% in the first period to 83% in the final period.

All endocrinologists showed a high rate of applying active surveillance compared to surgeons during the entire study period (86% vs. 58% for the entire period). In the final period, the use of active surveillance among endocrinologists was 97%.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

This analysis showed that close observation without surgery (active surveillance) could be successfully implemented for low risk small papillary thyroid cancers at Kuma Hospital in Japan. However, it required a significant amount of time to be accepted by most surgeons and endocrinologists. Critical for active surveillance is the presence of significant thyroid ultrasound expertise. Large medical centers with high-quality ultrasound surveillance capacity for appropriate patient selection and early detection of cancer progression may be more appropriate to adopt this method.

— Alina Gavrila, MD, MMSC

THYROID CANCER, continued

ATA THYROID BROCHURE LINKS

Thyroid Cancer (Papillary and Follicular): https://www.thyroid.org/thyroid-cancer/
Thyroid Surgery: https://www.thyroid.org/thyroid-surgery/

ABBREVIATIONS & DEFINITIONS

Papillary thyroid cancer (PTC): the most common type of thyroid cancer. There are 4 variants of papillary thyroid cancer: classic, follicular, tall-cell and noninvasive follicular thyroid neoplasm with papillary-like nuclear features (NIFTP).

Papillary microcarcinoma (PMC): a papillary thyroid cancer smaller than 1 cm in diameter.

Cancer metastasis: spread of the cancer from the initial organ where it developed to other organs, such as the lungs and bone.

Trachea: a large tube made of cartilage rings located in the neck that conveys air to and from the lungs; the windpipe.

Recurrent laryngeal nerve: branch of the vagus nerve that supplies the muscles that can open the vocal cords.

Active surveillance: close observation without surgery for patient with small, low risk thyroid cancers