The importance of identifying risk factor for contralateral occult carcinoma

Joon-Hyop Lee

Department of Surgery, Gachon University College of Medicine, Incheon, Korea

Article: Risk factor for contralateral occult carcinoma in patients with unilateral papillary thyroid carcinoma (Ahn HR, et al. Korean J Clin Oncol 2020;16:33-38)

The extent of surgery in patients with unilateral papillary thyroid carcinoma (PTC) has changed over the years. Ever since Mazzaferri demonstrated its superior outcome 40 years ago, total thyroidectomy had been the surgical extent of choice in treating PTC for decades [1]. In the 1980s and 1990s, patients were diagnosed with PTC mostly when they visited the clinic after the tumor had grown enough to be palpable. With facilitated access to health services and improvement in diagnostic technologies by the turn of the century however [2], it became more frequent for PTCs to be incidentally detected at a smaller size. This made it possible for the sudden increase in incidence of papillary thyroid microcarcinomas (PTMC), PTCs that are 1cm or smaller in diameter, in comparison to larger ones not only in South Korea but also around the world [3].

Furthermore, early detection and the entailing decrease in size of PTCs has changed the surgical strategy of surgeons [4]. Even in the studies from the early 1980s, Mazzaferri mentioned that for PTC patients with tumor size less than 1.5 cm in diameter, less than total thyroidectomy (i.e., unilateral lobectomy) demonstrated outcomes statistically differing insignificantly than from those results achieved with more aggressive therapy (i.e., total thyroidecto-

my) [1]. Recent data also demonstrated that oncologic outcomes are comparable between total thyroidectomy and thyroid lobectomy in PTMCs [5]. Provided that the oncologic outcomes are comparable, thyroid lobectomy would be a superior choice over total thyroidectomy because it would lead to less complications such as a vocal cord paralysis or postoperative hypoparathyroidism [6,7].

In case of a bilaterally occurring PTC (including PTMC), however, the main surgical choice remains total thyroidectomy which makes it important to confirm the absence of tumor on the contralateral thyroid gland before performing a lobectomy. However, the rate of preoperatively undiagnosed tumor foci incidentally detected by postoperative pathological analysis has been reported to be around 15.8% to 21.3% [8]. Therefore, the aim of this article—which is identifying risk factors that may be associated with contralateral malignant nodules—is of paramount importance if a surgeon wishes to avoid unnecessary reoperations.

Unfortunately, the authors could not find any significant differences between patients with or without contralateral occult carcinoma with respect to gender, age, primary tumor size, central lymph node metastasis, extrathyroidal extension and stage [9]. Although they demonstrated that Hashimoto's thyroiditis was associated with contralateral tumor, the diagnosis was based on postoperative surgical pathology reports (rather than by measuring serum anti-thyroid peroxidase antibodies [TPOAb] levels) which are unobtainable preoperatively. Although risk of seronegative thyroiditis does exist, we can take hint from the authors conclusion and refrain from routinely performing unilateral lobectomies for PTMCs when serum TPOAb levels indicate Hashimoto's thyroiditis. Prospective studies utilizing serum TPOAb levels as indicators for contralateral recurrence, however, should be conducted for serum TPOAb to be accepted in clinical practice as a true indicator of contralateral recurrence.

Received: May 25, 2020 **Accepted:** Jun 25, 2020

Correspondence to: Joon-Hyop Lee

Thyroid and Endocrine Surgery Section, Department of Surgery, Gachon University College of Medicine, 21 Namdong-daero 774beon-gil, Namdong-gu, Incheon 21565, Korea

Tel: +82-32-458-2624, **Fax:** +82-32-460-3247

E-mail: deftnovice@gmail.com

ORCID: Joon-Hyop Lee (<https://orcid.org/0000-0003-0470-7719>)

Copyright © 2020 Korean Society of Surgical Oncology

This is an Open Access article distributed under the terms of the Creative Commons Attribution Non-Commercial License (<http://creativecommons.org/licenses/by-nc/4.0>) which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

CONFLICT OF INTEREST

No potential conflict of interest relevant to this article was reported.

REFERENCES

1. Mazzaferri EL, Young RL. Papillary thyroid carcinoma: a 10 year follow-up report of the impact of therapy in 576 patients. *Am J Med* 1981;70:511-8.
2. Pellegri G, Frasca F, Regalbuto C, Squatrito S, Vigneri R. World-wide increasing incidence of thyroid cancer: update on epidemiology and risk factors. *J Cancer Epidemiol* 2013;2013:965212.
3. Ahn HS, Kim HJ, Welch HG. Korea's thyroid-cancer "epidemic": screening and overdiagnosis. *N Engl J Med* 2014;371:1765-7.
4. Haugen BR, Alexander EK, Bible KC, Doherty GM, Mandel SJ, Nikiforov YE, et al. 2015 American Thyroid Association Management Guidelines for Adult Patients with Thyroid Nodules and Differentiated Thyroid Cancer: The American Thyroid Association Guidelines Task Force on Thyroid Nodules and Differentiated Thyroid Cancer. *Thyroid* 2016;26:1-133.
5. Matsuzu K, Sugino K, Masudo K, Nagahama M, Kitagawa W, Shibuya H, et al. Thyroid lobectomy for papillary thyroid cancer: long-term follow-up study of 1,088 cases. *World J Surg* 2014;38:68-79.
6. Sittel C, Wassermann K, Mathen F, Eckel HE. Unilateral and bilateral recurrence of inferior laryngeal nerve paralysis. *Pneumologie* 2001;55:568-78.
7. Ahn SV, Lee JH, Bove-Fenderson EA, Park SY, Mannstadt M, Lee S. Incidence of hypoparathyroidism after thyroid cancer surgery in South Korea, 2007-2016. *JAMA* 2019;322:2441-3.
8. Koo BS, Lim HS, Lim YC, Yoon YH, Kim YM, Park YH, et al. Occult contralateral carcinoma in patients with unilateral papillary thyroid microcarcinoma. *Ann Surg Oncol* 2010;17:1101-5.
9. Ahn HR, Kang SY, Youn HJ, Jung SH. Risk factor for contralateral occult carcinoma in patients with unilateral papillary thyroid carcinoma. *Korean J Clin Oncol* 2020;16:33-8.