J Endocr Surg. 2019 Dec;19(4):159-161
https://doi.org/10.16956/jes.2019.19.4.159
pISSN 2508-8149·eISSN 2508-8459

JES Journal of Endocrine Surgery

Short Communication

Recommended Surgery for >1 cm Noninvasive Follicular Neoplasia with Papillary-Like Nuclear Features (NIFTP)

Alessandro Pontin, Ettore Gagliano, Gianlorenzo Dionigi

Division for Endocrine and Minimally Invasive Surgery, Department of Human Pathology in Adulthood and Childhood "G. Barresi", University Hospital G. Martino, University of Messina, Messina, Italy

Received: Oct 2, 2019
Revised: Nov 2, 2019
Accepted: Nov 6, 2019

Correspondence to
Alessandro Pontin
Division for Endocrine and Minimally Invasive Surgery, Department of Human Pathology in Adulthood and Childhood "G. Barresi", University Hospital G. Martino, University of Messina, Via C. Valeria 1, Messina 98125, Italy.
E-mail: alessandro.pontin1990@gmail.com

ORCID iDs
Alessandro Pontin
https://orcid.org/0000-0001-8904-5114
Gianlorenzo Dionigi
https://orcid.org/0000-0003-0864-6087

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

Author Contributions
Conceptualization: Alessandro Pontin, Ettore Gagliano, Gianlorenzo Dionigi. Writing - original draft: Alessandro Pontin, Ettore Gagliano, Gianlorenzo Dionigi. Writing - review & editing: Alessandro Pontin, Ettore Gagliano, Gianlorenzo Dionigi.

ABSTRACT

Papillary thyroid carcinoma (PTC) is a heterogeneous tumor group with differing pathogenesis and prognosis of the individual subtypes. In addition, a tumor entity has been spun off, now referred to as "noninvasive follicular neoplasm with papillary-like nuclear features (NIFTP). A recent study, based on a comprehensive evaluation of a prospective multicenter NIFTP-based retrospective study, was intended to clarify whether NIFTP can metastasize and thus justify a reduced resection rate compared to classical PTC. For 3 reasons, Authors nicely recommend caution regarding a limited thyroid procedure (i.e. lobectomy vs. completion thyroidectomy): i) In the current literature, lymph node metastases have been described in 10 patients with NIFTP, and in 1 patient lung metastases. ii) As reported for the first time in this study, nearly one-fifth of patients have NIFTP-associated PTMC with unclear potential for metastasis. iii) Observation periods are still relatively short and so far, there are no agreed follow-up standards.

Keywords: Thyroid surgery; Noninvasive follicular neoplasia; Papillary-like nuclear features; Thyroid gland

As numerous clinical and molecular pathological studies of recent years have shown, papillary thyroid carcinoma (PTC) is a heterogeneous tumor group with differing pathogenesis and prognosis of the individual subtypes (1). To avoid overtreatment of the increasing number of papillary thyroid microcarcinomas (PTMC), the new tumor node metastases (TNM) classification has therefore made significant changes in essential points (1). In addition, a tumor entity has been spun off, which is characterized by special clinical-morphological characteristics: the encapsulated follicular variant of PTC, now referred to as "noninvasive follicular neoplasm with papillary-like nuclear features (NIFTP)" (2-4). A recent study, based on a comprehensive evaluation of a prospective multicenter NIFTP-based retrospective study, was intended to clarify whether NIFTP can metastasize and thus justify a reduced resection rate compared to classical PTC (2). In detail, all patients from 9 high-volume endocrine surgery departments who underwent surgery between 2005 and 2015 and whose final surgical pathology revealed noninvasive follicular thyroid neoplasm with

JES Journal of Endocrine Surgery

papillary-like nuclear features (>10 mm) were included in a study (2). The primary outcome was to determine the potential for recurrent disease in these patients (2). Among the 363 patients with NIFTP, 345 patients (95%) underwent total thyroid resection. The median follow-up period was 5 years. Sixty-five (18.8%) subjects had an associated micro PTC. One hundred thirty-three (37%) patients underwent prophylactic lymph node dissection. One patient (0.7%) in this subgroup had a micrometastasis associated with micro PTC. One patient (1.5%) with an associated micro PTC had recurrent disease at 6 years (2). All patients with NIFTP features without micro PTC had no lymph node or distant metastasis or recurrent disease in the neck (2). The Authors of the present study concluded that NIFTP presents with indolent behavior. However, an associated micro PTC should be meticulously evaluated because coupled with node metastasis and/or of neck recurrence (2).

Due to the different molecular pathology of NIFTP and classical PTC, together with their different metastatic potential, it can be assumed that the NIFTP is indeed a separate, diagnostic-therapeutic subgroup of the PTC (1,2,5). However, since the NIFTP cannot be reliably diagnosed preoperatively by ultrasound and cytology, their therapeutic relevance arises essentially after primary hemithyroidectomy (1,2,5,6).

Finally, for 3 reasons, Authors nicely recommend caution regarding a limited thyroid procedure (i.e. lobectomy vs. completion thyroidectomy): i) In the current literature, lymph node metastases have been described in 10 patients with NIFTP, and in 1 patient lung metastases (1,2,5,6). ii) As reported for the first time in this study, nearly one-fifth of patients have NIFTP-associated PTMC with unclear potential for metastasis (2). iii) Observation periods are still relatively short and so far there are no agreed follow-up standards (1,2,7).

Further recommendations for managing NIFTP and other borderline tumors are expected to be issued and incorporated into clinical practice in the near future (1-7). The proposed reclassification should not be interpreted as indicative of a changed risk profile of an inherently low-risk neoplasm, or as supporting a nonsurgical approach to these neoplasms, as accurate preoperative identification of NIFTP has not yet been demonstrated (1-7).

REFERENCES

1. Dralle H. Can noninvasive follicular thyroid neoplasms with papillary-like nuclear features (NIFTP) metastasize? Chirurg 2019;90:501.
PUBMED | CROSSREF
2. Chereau N, Greilsamer T, Mirallié E, Sadowski SM, Pusztaszeri M, Triponez F, et al. NIFT-P: are they indolent tumors? Results of a multi-institutional study. Surgery 2019;165:12-6.
PUBMED | CROSSREF
3. Xu B, Farhat N, Barletta JA, Hung YP, Biase D, Casadei GP, et al. Should subcentimeter non-invasive encapsulated, follicular variant of papillary thyroid carcinoma be included in the noninvasive follicular thyroid neoplasm with papillary-like nuclear features category? Endocrine 2018;59:143-50.
PUBMED | CROSSREF
4. Thompson LD. Ninety-four cases of encapsulated follicular variant of papillary thyroid carcinoma: a name change to noninvasive follicular thyroid neoplasm with papillary-like nuclear features would help prevent overtreatment. Mod Pathol 2016;29:698-707.
PUBMED | CROSSREF
5. Xu B, Tallini G, Scognamiglio T, Roman BR, Tuttle RM, Ghossein RA. Outcome of large noninvasive follicular thyroid neoplasm with papillary-like nuclear features. Thyroid 2017;27:512-7.
PUBMED | CROSSREF

https://doi.org/10.16956/jes.2019.19.4.159

6. Thompson LD, Poller DN, Kakudo K, Burchette R, Nikiforov YE, Seethala RR. An international interobserver variability reporting of the nuclear scoring criteria to diagnose noninvasive follicular thyroid neoplasm with papillary-like nuclear features: a validation study. Endocr Pathol 2018;29:242-9.
PUBMED | CROSSREF
7. Hirokawa M, Higuchi M, Suzuki A, Hayashi T, Kuma S, Miyauchi A. Noninvasive follicular thyroid neoplasm with papillary-like nuclear features: a single-institutional experience in Japan. Endocr J 2017;64:1149-55.
PUBMED | CROSSREF

https://doi.org/10.16956/jes.2019.19.4.159