Topic: **THYROID CANCER**

Title: Trend in thyroid carcinoma size, age at diagnosis, and histology in a retrospective study of 500 cases diagnosed over 20 years.

Authors: **Trimboli P, Ulisse S, Graziano FM, Marzullo A, et al. (Roma, Italy)**

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SUMMARY

Background: Recently, the Italian Network of Cancer Registries analyzed 5101 cases of thyroid carcinoma showing a reduction of mortality rate of 4% per year. This prompted the authors to evaluate the temporal trend in tumor size, age at diagnosis, and histology in a retrospective analysis of 500 thyroid cancers diagnosed over a 20-year period.

Analysis: Thyroid cancers were divided in two groups. The first included 193 cases diagnosed from 1985 to 1994, and the second 307 from 1995 to 2004. The size of all tumors was significantly reduced from 40 $\pm$ 6 mm to 17 $\pm$ 5 mm. Age at diagnosis of carcinomas increased significantly from 40 years in the first group to 48 years in the second group. Analysis of the histological types revealed a significant increase of PTC (papillary) rate in the second decade from 82% to 92%, and a concomitant reduction of anaplastic thyroid cancer (ATC) from 3.7% to 1.0%. Moreover, a significant increase in micro-PTC rate from 3.7% to 36.4% was observed.

Conclusion: It may be speculated that the above decreased mortality rate for thyroid carcinoma could be related to the significant reduction with time of cancer size, to the progressive increase of PTC rate and to the reduction of ATC rate. These data, if confirmed in other series, underscore the importance of evaluating thyroid nodules smaller than 10 mm and corroborate recent findings suggesting that age be reconsidered as an independent prognostic factor for differentiated thyroid cancers.

COMMENT

This retrospective study has a main interest, which is to show (or rather confirm to us) that the pattern of diseases changes with time and progress in diagnostic methodologies. When I was a young doctor (a long time ago!), thyroid cancers were mainly diagnosed among palpable nodules, shown to be solitary and 'cold' on thyroid scintigraphy. Nowadays, one half of confirmed thyroid cancers are discovered in multinodular goiters (and not as a single nodular lesion) and they are often non palpable (i.e. 'seen' by ultrasound). Also, anaplastic thyroid cancers have become exceedingly rare in our daily endocrine practice, probably as a result of the surgical removal of thyroid nodules before anaplastic tissue can form. It was quite striking in the study of our Italian colleagues that micro-cancers of the papillary type (less than 10 mm in diameter) represented 36% of all their cases in the more recent years. Many of these were presumably thyroid cancers diagnosed in multinodular goiters, operated for various reasons.

Despite such favourable prognostic factors (smaller tumors, mainly of the papillary type), is it to say that the disease has

become “less malignant” ? The answer is NO, since we know that even micro-cancers can produce distant metastases. Therefore, the conclusion should be that thyroid ultrasonography (performed by experienced radiologists), followed by fine needle aspiration cytology (performed by experienced cytologists) have nowadays become the mainstay of the preoperative diagnosis of thyroid nodular lesions. Our attention must focus on small nodules that need to be investigated, aspirated, and followed up (when not removed by the surgeon). Also, there is now good worldwide consensus on the management of thyroid cancer after surgery and, using these guidelines, one can hope that the morbidity and mortality rates related to thyroid cancer (despite an increase in the prevalence, seen everywhere) will continue to decrease in the coming years.
(***Daniel Glinoer, M.D.; Ph.D.***)

See Figures below

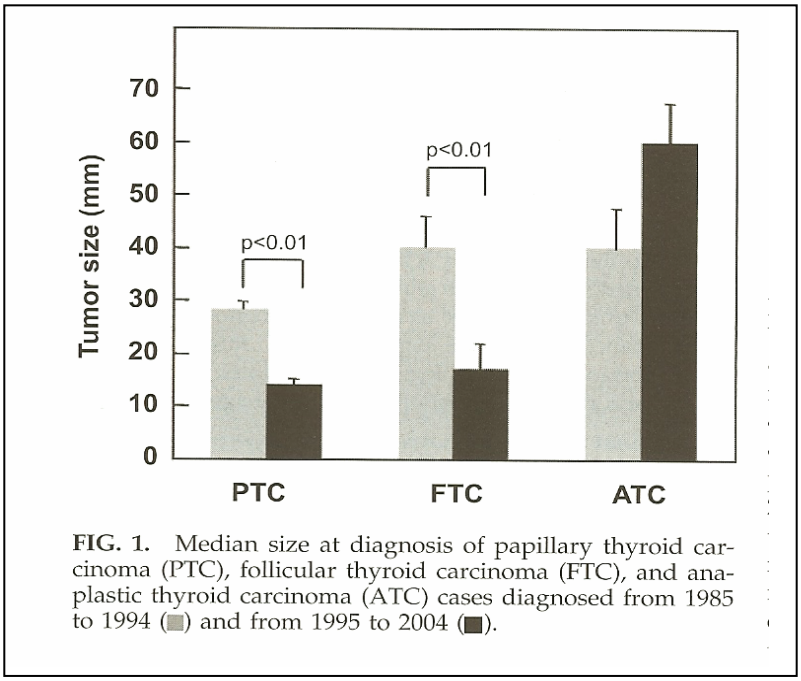

FIG. 1. Median size at diagnosis of papillary thyroid carcinoma (PTC), follicular thyroid carcinoma (FTC), and anaplastic thyroid carcinoma (ATC) cases diagnosed from 1985 to 1994 (■) and from 1995 to 2004 (■).

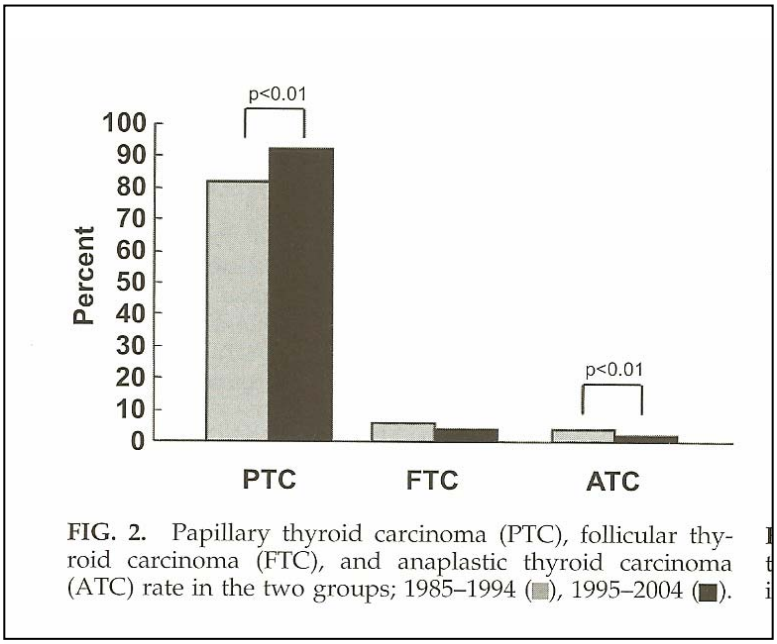

FIG. 2. Papillary thyroid carcinoma (PTC), follicular thyroid carcinoma (FTC), and anaplastic thyroid carcinoma (ATC) rate in the two groups; 1985–1994 (■), 1995–2004 (■).