SURVIVAL IS SIMILAR IN FAMILIAL AND NONFAMILIAL NONMEDULLARY THYROID CANCER

Robenshtok E, Tzvetov G, Grozinsky-Glasberg S, Shraga-Slutzky I, Weinstein R, Lazar L, Serov S, Singer J, Hirsch D, Shimon I, Benbassat C. **Clinical characteristics and outcome of familial nonmedullary thyroid cancer: a retrospective controlled study.** Thyroid 2011;21:43-8. Epub October 18, 2010.

SUMMARY

BACKGROUND
Familial nonmedullary thyroid carcinoma (FNMTC) constitutes about 10% of differentiated thyroid cancer diagnosed worldwide. There is a difference of opinion in the literature as to whether the familial disorder is more aggressive than sporadic cancer and whether it is more likely to recur.

METHODS
A retrospective review of the patients in the Rabin Medical Center Thyroid Cancer Registry was performed for patients initially treated during the years 1973 to 2004. Cases were deemed familial if there were two or more first-degree relatives affected with histopathologic confirmation of thyroid cancer of follicular-cell origin.

RESULTS
The study compared 67 patients with FNMTC with 375 patients with sporadic nonmedullary thyroid cancer (SPNMTC) with regard to age, size of tumor, type of tumor, staging, treatment, and recurrence. Ninety percent of patients in each group had papillary thyroid cancer, the remainder being follicular. There were no differences between the groups in mean tumor size, multifocality, capsular invasion, lymph-node involvement, or distant metastases. Treatment regimens were similar, and mean follow-up was 8.5 years for both groups. There was no difference between the groups in recurrence, persistence, or new distant metastases. Disease-free survival was 80% in both groups. Although disease-free survival was better in those with three or more affected relatives (90%) than in those with two affected relatives (77%), the difference was not significant.

CONCLUSIONS
The results indicate that familial nonmedullary thyroid cancer is not more aggressive than sporadic nonmedullary thyroid cancer.

COMMENTARY

Some previous studies have suggested that familial nonmedullary thyroid cancer is more aggressive than the sporadic form, but other studies do not support this contention. A recent Japanese study of 273 patients with familial papillary thyroid cancer (1) reported that disease-free survival and cause-specific survival rates were similar to those with sporadic papillary carcinoma. However, because of a greater incidence of multicentricity in the familial form than in the sporadic condition (46% vs. 38%), they recommended total thyroidectomy for familial papillary thyroid cancer, a procedure usually not used in Japan for stage 1 disease.

The causes of FNMTC have not yet been identified, so there is no genetic screening for the disease in contrast with familial medullary thyroid cancer. When there are only two affected members, there is a distinct possibility that the condition is sporadic, but there is a 96% likelihood of the disease being genetic when there are three or more affected family members. Current studies on the genetics of FNMTC were reviewed recently by Khan et al. (2).

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References

1. Ito Y, Kakudo K, Hirokawa M. Biological behavior and prognosis of familial papillary thyroid carcinoma. Surgery 2009;145:100-5.

2. Khan A, Smellie J, Nutting C, Harrington K, Newbold K. Familial nonmedullary thyroid cancer: a review of the genetics. Thyroid 2010;20:795-801.