The risk of thyroid cancer in a thyroid nodule on the basis of a tertiary reference thyroid cancer center experience


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Introduction

Thyroid nodules constitute a common and rising clinical problem in Polish population. It is estimated that thyroid nodules are discovered even in up to 1,000,000 of women, what is a consequence of iodine deficiency in Poland during the eighties of XX century. On the other hand, the incidence of thyroid cancer (TC), the most common endocrine malignancy, has rapidly increased during the last decades. According to the Polish National Cancer Registry 2192 new cases of TC were diagnosed in 2010, among them 384 in men and 1808 in women, comparing to 448 new cases in 1990 (333 women and 115 men). These numbers clearly demonstrate the increase in thyroid cancer incidence by almost 5-fold during the last 20 years. Neck ultrasound and fine needle aspiration biopsy (FNAB) with ultrasound guidance constitute the most common and widely available diagnostic tools.

Aim of the study

The aim of the study was to evaluate the risk of thyroid cancer in patients admitted to a tertiary reference thyroid cancer center.

Material and methods

Two hundred thirty one patients (181 women, 50 men at mean age 56 years, median 56 years) were diagnosed due to a thyroid tumor or multinodular goiter in M. Skłodowska-Curie Memorial Cancer Center and Institute of Oncology in Gliwice, a tertiary reference center for TC in Poland. In total 282 thyroid nodules were submitted to ultrasonound-guided FNAB and involved in a further retrospective analysis. In 187 patients FNAB was carried out on one nodule, in 37 on two nodules, whereas in the 7 remaining patients underwent on 3 tumors. Cytological results were categorized according to the Bethesda System for Reporting Thyroid Cytology (Table 1). All patients were referred to surgery. The minimal extent of the operation varied with an initial diagnosis or US findings from lobectomy for follicular neoplasm or suspicion of TC, via subtotal thyroidecetomy for multinodular goiter and total thyroidecetomy in case of TC. Histopathological findings were compared with FNAB results.

Conclusions

The risk of thyroid cancer in thyroid nodules referred to a specialized thyroid cancer center is substantially higher than in a routine practice. Thus, more careful procedures, including molecular markers are necessary to state a proper diagnosis and start the treatment on time.

References


