Surgical treatment for anaplastic thyroid cancer

KEYWORDS: Thyroid Neoplasms; Carcinoma; Surgery

Background: Anaplastic thyroid cancer is relatively rare but extremely aggressive neoplasm. The aim of the present paper was to study the possibility of surgery for anaplastic thyroid cancer.

Methods: During 5-year period (from 1998 to 2002) in the Center for endocrine surgery, we found anaplastic thyroid cancer in 65 patients (44 female and 21 male patients), of median age 63 years (range: 37-88 years). Diagnosis was determined on the basis of histological analysis in operated patients or on cytology findings in case of patients who were not operated. Histological analysis confirmed anaplastic transformation of papillary thyroid cancer in 18 cases.

Results: In 50% patients we performed only fine needle biopsy, and in 37% patients operative biopsy or tumor reduction. We performed radical surgery, hemithyroidectomy or total thyroidectomy, in 13% patients with anaplastic thyroid cancer. Thyroid goiter was present in 35% patients longer than a year before diagnosis of anaplastic cancer was made.

Conclusion: Possibility of surgery for anaplastic thyroid cancer is very limited. In about one third of patients there were longstanding goiter or histological verified dedifferentiation of papillary thyroid cancer. These patients should have been operated before anaplastic transformation.

Galectin-3: a promising marker of thyroid malignancy

KEYWORDS: Thyroid Neoplasms; Carcinoma; Tumor Markers, Biological; Lectins

Background: Galectin-3 is an endogenous beta-galactoside binding lectin implicated in neoplastic transformation and tumor progression. High levels of this lectin have recently been found in malignant thyroid tumors, but not in normal or benign thyroid tissue, suggesting galectin-3 as a promising presurgical marker of thyroid malignancy.

Methods: We analyzed immunohistochemically galectin-3 expression in thyroid tissue using a monoclonal antibody. The total of 108 tissue specimens included 55 cases of thyroid carcinoma (30 papillary, 15 follicular, and 10 anaplastic type), 15 samples of follicular adenoma, 15 samples of normal thyroid tissue, and 23 thyroid tissue specimens from human fetuses (16 to 37 weeks of intrauterine life).

Results: The results showed galectin-3 expression in 20/30 papillary carcinomas, 11/15 follicular carcinomas, 10/10 anaplastic carcinomas, and 4/15 follicular adenomas. Thyroid follicular cells in normal adult and fetal tissue were negative.

Conclusions: These results further confirm that galectin-3 expression is a feature of malignant thyroid cells, and that immunohistochemical detection of galectin-3 could be useful in thyroid carcinoma diagnostics. The absence of galectin-3 in thyroid cells during fetal development suggests that galectin-3 is expressed de novo during malignant transformation of thyroid epithelium, thus it should not be considered an oncofetal antigen.