323. THE GENETIC PARTICULARITIES IN PAPILLARY THYROID CANCER

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Introduction. Papillary Thyroid Cancer (PTC) is taking the 1st place in malign processes of endocrine system, being also the most studied problem in cases of thyroid gland cancer. PTC is taking 40-85% from the total of the thyroid cancer in the past few decades. This is because of the human activity in the past- pollution of the environment, the rise of the radioactivity in the water, air and ground, registered a sudden rise in morbidity in EU and USA. We would like to mention the genetic factor in etiology of PTC. It has been recently shown that these tumors commonly have one of three genetic alterations: BRAF point mutations, RET/PTC rearrangements, or RAS point mutations. This factor has to have a substantial role in precocious diagnosis of the cancer and prognosis after the chirurgical treatment.
Aim of the study. To elucidate the role of the genetic modifications in pathogenesis and cancerogenesis of the disease
Materials and methods. We performed a retrospective study on a group of 50 patients with thyroid cancer, who were investigated: clinical, ultrasound, histological and laboratory (thyroid hormone level) and treated in the oncological "Head and neck" department of the Institute of Oncology between December 15- May 30, 2019 . The study included primarily diagnosed cases with CPT after surgical intervention. Data on the main risk factors, demography and tumor location have been collected from medical records. We will classify the patients after age, sex, cancer stage, evolution rate, data about the family anamnesis: the presence if the thyroid nodular disease and the presence of another neoplastic processes in relatives.
Results. 83% of patients were diagnosed with CPT, 80% are female, middle age of involvement of 51-60 years old (38%). We observe hypoplasia of the thyroid gland on 6 patients (12%); hyperplasia of grade l-ll on 27 patients (54%); hyperplasia of grade lll-lV on 16 patients (33%). According to hormonal levels, euthyroidism, had 18 patients (37%); hypothyroidism 10 patients (21%); hypothyroidism 21 patients (42%). CPT patients were diagnosed in pTNM following stages: st.l T1N0M0, 7 patients (15%); st.ll T2N0M0, 22 patients (45%); st.lll T3N1M0, 15 patients (30%); st.lV T4N1M1, 5 patients (10%). From the studied group, 19 patients have relatives with nodular pathology of the thyroid gland (37%).

50% of the patients have an aggravated hereditary anamnesis. We studied the genealogical trees of the patients; we found out that: in 25 families of 2 and more relatives (gr.l and ll) with cancer (thyroid, colorectal, breast, ovarian, malignant melanoma cancer) and thyroid nodular pathology.

Conclusions. From the point of view of molecular and genetic side, PTC is heterogeneously and it needs new approaches of genetic modifications in clinical practices. The proportion of patients with cancer is increasing with age, aggravated hereditary and personal anamnesis. It is necessary to introduce screening by genetic exam for high-risk patients.

Key words: Papillary Thyroid cancer (PTC), genetic modifications, genetic testing, screening, mutations