HAVE K-RAS MUTATIONS A PREDICTIVE VALUE IN WELL-DIFFERENTIATED THYROID CANCER? PRELIMINARY RESULTS OF AN ON-GOING STUDY

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Background/Purpose: Thyroid cancer is the most common type of endocrine malignancy, and its incidence has been increasing. *K-RAS* mutations are more common in endemic iodine deficient regions, like Turkey. The clinical and pathologic implications of k-ras mutation in PTC are, in part, still controversial. The aim of the present study was to evaluate the prevalence of the *K-RAS* mutation in tumor samples and its relation with high-risk clinicopathologic features.
Methods: From January 2000 to December 2007, well-differentiated thyroid cancer (WDTC) patients who underwent surgery, were enrolled retrospectively. DNA was isolated from parafin-embedded blocks and polymerase chain reaction was used to amplify *K-RAS* mutations. Univariate and multivariate analyses were performed to analyze associations between these mutations and clinicopathologic features.
Results: We identified 39 patients with WDTC with absolute follow-up (female:male = 1:3,3). The median follow-up was 96 months. The mean age was 44.4 (16-80). At diagnosis, 22 (56.4%) of all the patients were ≥ 45 years and 17 (43.6%) patients were < 45 years. *K-RAS*mutation was found in 6 (15,3%) patients. Except tumoral invasion, none of the analyzed prognostic factors, including age, gender, lymph node status, multifocality, tumor diameter and locoregional recurrence were correlated with *K-RAS* mutation status.
Discussion & Conclusion: *K-RAS* mutation did not have any significant effect on tumor aggressiveness in Turkish patients with WDTC, except predicting tumor invasion. Our results underline that it is early to reach a conclusion that the *K-RAS* mutation is related with poor clinical outcomes.