ISSN 2446-5321

Archives of Endocrinology and Metabolism

OFFICIAL JOURNAL OF THE BRAZILIAN SOCIETY OF ENDOCRINOLOGY AND METABOLISM

Vol. 61 • Supplement 02 – June 2017

SBEM
Sociedade Brasileira de Endocrinologia e Metabologia

56600 IMPACT OF BRAFV600E MUTATION ANALYSIS ON AMERICAN THYROID ASSOCIATION RISK CLASSIFICATION AND OUTCOMES IN PAPILLARY THYROID CANCER PATIENTS

Rafael Selbach Scheffel[1], Ana Patrícia de Cristo[1], André B. Zanella[1], Miriam Romitti[1], José Miguel Dora[1], Ana Luiza Maia[1]

[1] Hospital de Clínicas de Porto Alegre

Introduction: The B-RAFV600E mutation has been associated with aggressive clinicopathological features in papillary thyroid cancer (PTC). However, its prognostic role is still controversial. Notwithstanding, the American Thyroid Association (ATA) included the B-RAFV600E mutation analysis in the 2015 risk classification system. **Objectives:** To evaluate the impact of the B-RAFV600E mutation on the ATA risk classification and outcomes of patients with PTC. **Methods:** PTC unselected individuals from a cohort attending the thyroid outpatient clinic of a university based hospital who had analysis of the B-RAFV600E mutation were included in this study. Patients were classified as having low, intermediate and high recurrence risk according to the 2009 ATA risk classification system. The mutation was assessed by PCR and sequencing. The impact of mutation analysis was evaluated in the reclassification on the ATA risk system and disease outcomes. Persistent disease was defined as the presence of clinical or radiological and/or biochemical disease (thyroglobulin under suppression > 1 ng/mL and/or stimulated thyroglobulin > 2 ng/mL). **Results:** Of the 133 patients evaluated, 106 (79.7%) were women, and 45 (33.5%) presented the B-RAFV600E mutation. Regarding the extension of disease, median tumor size was 1.7 cm (P25-75 1.0-3.0); 66 (49.6%) patients had lymph node and 9 (6.8%) had distant metastases. According to the 2009 ATA risk system, the risk level was classified as low, intermediate and high in 57 (42.9%), 52 (39.1%) and 24 (18.0%) patients, respectively. The data on B-RAF mutation reclassified 9 (6.8%) patients from low to intermediate risk. After a median follow-up of 6.0 years (P25-75 3.0-9.0), disease status was available for 115 patients: 84 (73%) patients were disease-free and 31 (27%) had persistent disease. Regarding BRAF mutation status, the prevalence of persistent disease was similar in patients with positive and negative mutation: 28.9% *vs.* 26.0% (P = 0.90). In the multivariate analysis, the mutation was also not associated with persistent disease status (RR 1.04; 95% CI 0.62-1.76). Interestingly, none of the patients who had the risk increased from low to intermediate showed persistent disease on follow-up. **Conclusion:** Although B-RAFV600E mutation analysis reclassified a small proportion of patients, it does not add in prediction of outcomes in patients with PTC. The benefit of including the B-RAFV600E mutation analysis in clinical practice must be considered.

56623 MEDULLARY THYROID CANCER PATIENTS UNDERGOING VANDETANIB TREATMENT: CLINICAL DATA FROM THE REAL-WORLD PRACTICE AT A SINGLE TERTIARY CARE CENTRE

Helton Estrela Ramos[1], Amandine Berdelou[1], Cristiana Andrade[1], Maria Laura Iglesias[1], Fábio Hecht[1], Sophie Leboulleux[1], Eric Baudin[1], Martin Schlumberger[1]

[1] Universidade Federal da Bahia (UFBA)

Introduction: Vandetanib (VDT), a tyrosine kinase inhibitor (TKI) that targets ret, VEGFR2 and EGFR, is effective in patients with medullary thyroid cancer (MTC). Despite evidence of improved progression free survival (PFS) and high overall response rate in clinical trials, data on the use of VDT in the real-life clinical setting remain limited. **Objective:** We retrospectively reviewed the efficacy of VDT in locally advanced or metastatic MTC treated at Gustave Roussy. **Methods:** Sixty-five patients were treated with VDT between 2006 and 2015, as first line treatment in 50 patients and as second-line treatment in 11. Four patients were excluded for incomplete data. **Results:** There were 61 patients (74% men). Mean age was 46 years and 7 had hereditary MTC. 66% had metastatic disease in the mediastinum, liver (79%), bones (72%), or lung (59%), and 2 had only locally advanced disease. At the time of evaluation, with a median time of 40 months since VDT treatment initiation and a median treatment duration of 27 months (range 1,1-131 months), 10 patients were still receiving VDT for a median duration of 103 months (range 13-128 months). 36/61 patients discontinued treatment for disease progression after a median treatment duration of 24 months (range 1,8-80 months) and 13 patients for adverse events. PFS at 2 and 5 years were 70% (95% CI 59%-83%) and 38% (95% CI 24-54%), respectively. Best tumor response was a complete response in 3 patients, a partial response in 28 (46%), stable disease in 27 (44%), and progression in 3 patients (5%). Median decreases in tumor size according to RECIST were -18% and -38% for 1st and 2nd line VDT, respectively. **Conclusions:** These findings suggest that the introduction of VDT as molecular-targeted agent resulted in favorable outcomes in MTC patients. **Support:** Capes.