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USEFULNESS OF FDG-PET/CT İN ONGOİNG RİSK STRATİFİCATİON OF HİGH/INTERMEDİATE RECURRENCE RİSK DİFFERENTİATED THYROİD CARCİNOMA PATİENTS

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Introduction - Purpose : Follow-up surveillance in DTC patients should be based on the individual patient´s risk of recurrence or death from thyroid cancer. The ongoing risk stratification recently published in different guidelines provides important additional information that may significantly alter the initial risk assessment. The goal of this study is to evaluate FDG PET/CT usefulness in ongoing risk stratification of high/intermediate risk of recurrence differentiated thyroid carcinoma.

Methods - Tools : Retrospective observational study of high/intermediate risk of recurrence differentiated thyroid carcinoma patients treated with surgery and radioidine ablation between 2012-2016. Demographic data, surgery and pathology report, neck ultrasound and I-131 whole body scan results and biochemical test reports were collected. We performed FDG- PET/CT just before or immediately after surgery. We confirmed FDG- PET/CT results with other imaging techniques, pathology report, first year whole body scan, neck ultrasound or follow-up. We classified patients as having an excellent response, acceptable response and incomplete response to initial therapy according with Tuttle criteria.

Findings : 150 patients mean age 48,9±14,3 years , 70% women, mean follow-up: 20,1±11,1 months). 60 % of patients started with thyroid nodule, with malignant ultrasound characteristic up to 64,6 %. Histological subtypes were classic papillary thyroid cancer, follicular and oncocytic variant of thyroid carcinoma 49.3, 14,6 and 11,3% respectively). 77 patients 51,7%) showed positive uptake in FDG- PET/CT, with negative I-131 whole body scan up to 63,3% of them. 43 patients 28,6%) needed surgey after FDG- PET/CT. One year after initial therapy, 41,8% of patients showed excellent response, 16,2% acceptable response and 42% incomplete response. Excellent response were statistically significant related to negative FDG-PET/CT scan $p<0.001$)Excellent response were statistically significant related with initial intermediate risk of recurrence $p<0.01$).Sensitivity, specificity and diagnostic accuracy values of PET/CT were 94,7%, 87,7% , 91,6% respectively.

Discussion : FDG-PET/CT early performed is a useful tool in ongoing risk stratification of high/intermediate risk of recurrence differentiated thyroid carcinoma. A negative PET/CT scan is related to an excellent response at initial treatment in patients with high/intermediate risk of recurrence.

Keywords: FDG-PET/CT, , Recurrence, High/Intermediate Risk, Differentiated Thyroid Carcinoma