# PARATHYROID ADENOMAS AND THEIR WASHOUT KINETICS OF $^{99m}$Tc-MIBI IN COMPARATION WITH OTHER SCINTIGRAPHYC METHODS

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**AIM:** The aim of present study was to test the diagnostic value of $^{99}$mTc-MIBI washout kinetics in parathyroid adenomas as compared with other scintigraphyc methods.

**PATIENTS AND METHODS:** Our group consisted of 30 patients with primary hyperparathyroidism (4 men, 26 women, 57,2 y, 20-77y). The parathyroid adenomas was surgically confirmed. In preoperative investigation in all patients the subtraction ($^{99}$mTcO$_4$ - $^{99}$mTc-MIBI) scintigraphy and $^{99}$mTc-MIBI SPECT tomography were performed. In all patients the washout kinetics of $^{99}$mTc-MIBI was calculated. The ROI around adenoma and the ROI of the same size over the thyroid lobe was drawn. A count ratio of parathyroid thyroid was determined using the average counts in each. The washout kinetics was expressed by comparing the early results with the delayed ones corrected for decay.

**RESULTS:** Among 30 patients, subtraction scintigraphy correctly identified 23 adenomas (77%), SPECT 28 tomography adenomas (93%). In 18 adenomas only (60%) $^{99}$mTc-MIBI retention was noted. Fast washout of $^{99}$mTc-MIBI in same parathyroid adenomas could be the reason for false negative results by SPECT tomography and subtraction scintigraphy results.

**CONCLUSION:** According our results the accurate method is the SPECT tomography, followed by subtraction scintigraphy. The washout kinetics of $^{99}$mTc-MIBI is unreliable method for localization of parathyroid adenomas.