Summary

Evaluation of Clinical Utility of ^{123}I-MIBG Scintigraphy in Localization of Tumors of Sympathetic and Adrenomedullary Origin —A Report of Multicenter Phase III Clinical Trials—

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Phase III clinical study was performed to evaluate clinical utility of ^{123}I-MIBG in the localization of tumors in 48 patients with tumors of sympathetic and adrenomedullary origin, diagnosed or strongly suspected. Sixteen patients had pheochromocytoma, 23 had neuroblastoma, 7 had medullary carcinoma of the thyroid, and 2 had Sipple syndrome. In 3 out of 48 patients, ^{123}I-MIBG scintigraphy was performed twice. The clinical utility of ^{123}I-MIBG was evaluated in 50 cases. Out of 140 lesions, ^{123}I-MIBG scintigraphy demonstrated 51 true positive, 79 true negative, 1 false positive, and 2 false negative. Seven lesions were not evaluable. Sensitivity was 96.2%, Specificity was 98.8%, and Accuracy was 97.7%. An acquisition between 4 hrs and a day after injection was adequate for tumor detection. Neither adverse reactions nor abnormal laboratory findings were noted in relation to ^{123}I-MIBG injections. Our study indicates that ^{123}I-MIBG is a safe and useful radiotracer for visualization and localization of tumors of sympathetic and adrenomedullary origin.

Key words: ^{123}I-MIBG, Pheochromocytoma, Neuroblastoma, Medullary carcinoma of thyroid, Sipple syndrome.