

Summary

Iodine-123-MIBG Scintigraphy in Neuroblastoma; Relationship between the Intensity of Uptake and Tumor Characteristics

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Iodine-123-MIBG (^{123}I -MIBG) scintigraphy were performed for 23 patients with neuroblastoma at diagnosis. The intensity of MIBG activity in the primary tumor was evaluated visually (grade 3; intense uptake ~ grade 0; no definite uptake), and its relationship to the size, degree of tumor spread, urinary catecholamine metabolites (VMA, HVA), and histological types were investigated.

The results of ^{123}I -MIBG uptake grade were as follows: grade 3; 44% (10/23), grade 2; 30% (7/23), grade 1; 17% (4/23), grade 0; 9% (2/23). The grade was not associated with the tumor size, or the degree of tumor extension to the distant lesion, either. The more catecholamine metabolites were excreted in the

urine, the tumor tended to have more intense uptake. The tumors of neuroblastoma rosette fibrillary type, and ganglioneuroblastoma poorly differentiated type had more intense uptake than neuroblastoma round cell type and ganglioneuroblastoma well differentiated type. The case of ganglioneuroma did not have definite MIBG uptake.

The intensity of MIBG uptake is not relevant to the pathological grade of neuroblastoma, but considering the electromicroscopical features of neuroblastoma reported previously, it is thought to reflect the histological type.

Key words: Neuroblastoma, ^{123}I -MIBG activity, Catecholamine metabolites, Histopathological type.