

rCBF in neurodegenerative diseases as estimated by the autoradiographic (ARG) method and delayed I-123-IMP studies

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A total of 24 patients with a mean age of 45.8 ± 20.8 were included in the study. The patients were grouped as Control (C), Degenerative Syndromes (DS), Degeneration Associated with External Factors (DEF), Degeneration Associated with Focal Neurologic Lesion (DFN) and Demyelinating Disease (DM). Imaging started 15 minutes for early and 4 hours for delayed scans after IV infusion of I-123 IMP. The rCBF was calculated by the IMP autoradiographic (ARG) method. The wash-out ratio (WR) was calculated as the ratio of the Delay/Early count. In the rCBF of the various areas of the brain, significant differences were noted between various disease groups. No correlation was noted between rCBF and WR ($r = -0.50$). The WR of patients grouped according to various disease processes did not show a significant difference between various areas of the brain. In conclusion, the rCBF was effective in separating both various areas of the brain and disease entities. WR from a delayed study is less useful in neurodegenerative diseases.

Key words: iodine-123-IMP ARG method, regional cerebral blood flow, neurodegenerative disease