

## Assessment of outcome by EC/IC bypass with $^{123}\text{I}$ -iomazenil brain SPECT

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We report two patients with occlusive cerebrovascular disease who were examined by means of benzodiazepine receptor SPECT (BZR-SPECT) with  $^{123}\text{I}$ -iomazenil (IMZ) before extracranial-intracranial bypass surgery (EC/IC bypass). Preoperative low perfusion areas detected by cerebral blood flow SPECT (CBF-SPECT) were divided into two parts on BZR-SPECT images. In the low perfusion areas where the BZR were preserved, regional cerebral blood flow (rCBF) increased on postoperative CBF-SPECT, but where the BZR were not preserved, rCBF did not increase on postoperative CBF-SPECT. On visual inspection, the SPECT images of postoperative CBF-SPECT appeared similar to those of preoperative BZR-SPECT. For evaluation of the ischemic brain condition itself, instead of the cerebral metabolism, the distribution and activity of cerebral neurons indicated by BZR-SPECT with IMZ might be utilized.

**Key words:**  $^{123}\text{I}$ -iomazenil, benzodiazepine receptor, SPECT, ischemia, EC/IC bypass