

Summary

Benzodiazepine Receptor Imaging in the Brain: Recent Developments and Clinical Validity

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Recent developments of benzodiazepine receptor imaging (^{123}I -Iomazenil SPECT and ^{11}C -Flumazenil PET) in neuropsychiatric disorders were reviewed.

In focal epilepsy, a number of previous studies have reported a decreased benzodiazepine receptor binding in epileptic foci and greater sensitivity compared to regional cerebral blood flow imaging, especially for diagnosis of medial temporal lobe epilepsy. These findings indicate clinical validity of benzodiazepine receptor imaging in focal epilepsy and may be related

to the “disinhibition mechanism” in GABA/benzodiazepine systems underlying epilepsy.

In panic disorder, abnormal benzodiazepine receptor bindings are recently demonstrated in the temporal, parietal or frontal cortex. Further studies would clarify the “benzodiazepine dysfunction hypothesis” in panic disorder.

Key words: Benzodiazepine receptor imaging, ^{123}I -iomazenil SPECT, ^{11}C -flumazenil PET, Epilepsy, Panic disorder.