

神経移植の核医学的評価に関する基礎的研究

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Fundamental Study on Assessment of Neurotransplantation Using Nuclear Medicine Imaging

Research Project

Project/Area Number

08671011

Research Category

Grant-in-Aid for Scientific Research (C)

Allocation Type

Single-year Grants

Section

一般

Research Field

Radiation science

Research Institution

KANAZAWA UNIVERSITY

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Alzheimer's disease / Lesion of Nucleus Basalis Magnocellularis / Acetylcholine / Receptor / Neurotransplantation / Transporter

Research Abstract

Alzheimer's disease is one of most troublesome problems encountered in the elderly population. One proposed hypothesis is that a deficit in cholinergic neurotransmission in Alzheimer's disease underlies this serious symptom of the disease. Cholinergic denervation rat model by producing an unilateral lesion of nucleus basalis magnocellularis (NBM) are reported to a model of cognitive deficits, one of instructive models of Alzheimer's disease (AD). The neurotransplantation is now promising as an effective strategy for functional repair in a variety of neural systems in disorders such as Parkinson's disease. In this study autotransplantation of vagal ganglion was performed to NBM lesioned rats. The effects of cholinergic grafts on cholinergic systems evaluated by autoradiographic images in duration of 1,2 and 4 weeks after surgery. Cerebral blood flow (CBF), muscarinic acetylcholine receptor (mAChR), m1 and m2 subtype of AChR-mRNA images were obtained using ^{99m}Tc-hexamethyl-propyleneamine ... More

Research Products (4 results)

All Other

All Publications (4 results)

[Publications] Shiba K: "In vitro characterization of radioiodinated (-) m-Iodovesamicol in rat cerebral membranes" Life Sciences. 59 · 13. 1039-1045 (1996) ▼

[Publications] Kuji I: "Discrepancy between blood flow and muscarinic receptor distribution in rat brain after middle cerebral occlusion" Eur J Nuclear Medicine. 24 · 6. 665-669 (1997) ▼

[Publications] Shiba, K.: "In vitro characterization of radioiodinated (-) m-Iodovesamicol in rat cerebral membranes." Life Sciences. 59 (13). 1039-1045 (1996) ▼

[Publications] Kuji, I.: "Discrepancy between blood flow and nuscarinic receptor distribution in rat brain after middle cerebral occlusion." Eur J Nuclear Medicine. 24 (6). 665-669 (1997) ▼

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