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研究简报

Aβ斑块显像剂苯并噻唑衍生物的^{11}C标记

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摘要 为寻找合适的碳-11标记的在体Ab 斑块显像剂，根据文献合成了苯并噻唑（BTA）的前体：（对胺基苯）苯并噻唑类（APBT），并用改良法碳-11碘代甲烷标记了APBT；柱色层法测标记率；改良法碳-11标记BTA的效率为58%。本文对碳-11标记方法和放射性标记率的方法作了改过，明显提高了标记效率，改进后的标记率测量方法简单、有效；正常小鼠的脑摄取[11]-BTA-1较高，2min全脑摄取为3.81± 0.34%/ID；非特异区清除快，2min/30min摄取比达到10。[11]-BTA-1是一个有希望用于早老痴呆诊断的Ab 斑块显像剂。

关键词 阿尔茨海默病 碳-11 β淀粉样蛋白 苯并噻唑

分类号

Carbon-11 labelled Thioflavin T derivative for Aβ-Amyloid imaging

Abstract The synthesis of 2-(4-aminophenyl)benzothiazole (APBT) was reported. The carbon-11 labeled APBT was performed by improved-methods with [11C]-methyl iodide. The labeled yield was measured with column-methods. The results showed that the column-methods for labeled yields was simple and efficient. The improved-methods led to radiochemistry yield of 58%(n=10) when [11C]CH3I react with APBT. Intravenous injection of [11C]-BTA-1 in control mice resulted in high brain uptake. The brain uptake was 3.81± 0.34%/ID at 2min. The uptake ratio of 2/30 min was 10. [11C]-BTA-1 was a promising b -amyloid agent for Alzheimer's disease.

Key words AD C-11 β-Amyloid Benzothiazole

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