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2型糖尿病患者认知功能受损与血清脑源性神经营养因子的相关性

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摘要：

摘要目的：研究2型糖尿病患者认知功能变化和血清脑源性神经营养因子（BDNF）水平的关系。方法：2型糖尿病组144例，正常对照120例，调查所有受试的人口学资料和临床资料，并进行重复性成套神经心理状态测验（RBANS），ELISA检测血清脑源性神经营养因子水平。结果：2型糖尿病组和正常对照组相比，在认知标准化总分、言语功能、即刻记忆、延时记忆和注意功能方面明显下降(P<0.01)。2型糖尿病患者血清BDNF水平低于正常(P<0.01)。这种BDNF的变化与2型糖尿病患者的认知标准化总分、即刻记忆、视觉广度、延时记忆和注意功能下降相关，调整年龄、性别、文化程度等影响因素后，血清BDNF水平与认知标准化总分、延时记忆和注意功能的关联依然显著(校正后P总=0.039；P延时=0.025；P注意=0.013)。结论：2型糖尿病患者存在认知功能损伤，这种认知损伤，尤其是注意和延时记忆功能下降与血清BDNF降低有关。

关键词：脑源性神经营养因子 糖尿病 认知障碍 重复性成套神经心理状态测验

The association between serum brain-derived neurotrophic factor level and cognitive decline in patients with type 2 diabetes

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Abstract:

Abstract Objective:To explore the association between serum brain-derived neurotrophic factor(BDNF) level and cognitive dysfunction in patients with type 2 diabetes mellitus(T2DM). Method: The 144 patients with known T2DM were compared with 120 age-sex and education matched, non-diabetic controls. Cognitive function was assessed by using the repeatable battery for the assessment of neuropsychologieal status（RBANS）test. Serum BDNF level was tested by ELISA. Result: In the RBANS test, patients differed significantly from healthy controls on the total index scores and four subscales for attention, speech, immediate and delayed memory(P<0.01). Also, a significant decline in serum level of BDNF in T2DM group was observed comparing with the controls(P<0.01). Performances in RBANS test on attention, visuospatial, immediate memory, delayed memory domains and total index scores in T2DM patients were positively correlated with the level of serum BDNF. Multiple regression analysis showed that the differences between two groups on RBANS attention, delayed memory and total score remained significantly even after controlling the factors of age, gender, and education. Conclusion: Persons with T2DM expressed poorer cognitive performance than healthy controls. Serum BDNF level decreased and associated with cognitive decline in patients with T2DM, especially on the domains of attention and delayed memory.

Keywords:brain-derived neurotrophic factor diabetes cognitive dysfunction repeatable battery for the assessment of neuropsychologieal status

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