

人类与医学遗传学

注意缺损多动障碍和儿茶酚-O-甲基转移酶基因无关联性

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摘要 以往研究表明, 儿茶酚胺系统可能参与注意缺损多动障碍 (attention-deficit hyperactivity disorder, ADHD) 的发生, 而儿茶酚胺-O-甲基转移酶 (catechol-O-methyltransferase, COMT) 是一种降解多巴胺和去甲肾上腺素系统的儿茶酚胺神经递质的酶。因此, 采用两种以家系为基础的分析方法, 即传递不平衡实验 (transmission disequilibrium test, TDT) 和单倍型为基础的单倍型相对风险率 (haplotype-based haplotype relative risk, HHRR) 去探讨COMT和中国人人群中79个ADHD核心家系的关联性, ADHD诊断符合DSM-IV的诊断标准。TDT ($\chi^2=1.03$, $df=1$, $p>0.05$) 和HHRR ($\chi^2=1.08$, $df=1$, $p>0.05$) 两种方法的分析结果表明, COMT等位基因不能优先传递给ADHD儿童, 提示在中国人人群中ADHD与COMT基因无关联性。

关键词 [注意缺损多动障碍](#); [儿茶酚-O-甲基转移酶](#); [传递不平衡试验 \(TDT\)](#); [单倍型为基础的单倍型相对风险率 \(HHRR\)](#); [关联性](#)

分类号

No Association Between Attention-deficit Hyperactivity Disorder and Catechol-O-Methyltransferase Gene in Chinese

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Abstract

Previous studies suggested that the catecholaminergic systems may be involved in the pathogenesis of Attention-deficit hyperactivity disorder (ADHD). Since catechol-O-methyltransferase (COMT) is an enzyme involved in degradation of Catecholaminergic neurotransmitters of the dopaminergic and noradrenergic systems. To test this hypothesis, we used two family-based analyses, the transmission disequilibrium test (TDT) and the haplotype-based haplotype relative risk (HHRR), to examine possible association between COMT gene and DSM-IV-diagnosed ADHD in a Chinese sample consisting of 79 ADHD probands and their parents. Both TDT ($\chi^2=1.03$, $df=1$, $P>0.05$) and HHRR ($\chi^2=1.08$, $df=1$, $P>0.05$) analyses failed to detect preferential transmission of a COMT allele to the ADHD children. Our data suggested that there was no association between ADHD and the COMT gene in the Chinese population.

Key words [Attention-deficit hyperactivity disorder \(ADHD\)](#) [catechol-O-methyltransferase \(COMT\)](#) [transmission disequilibrium test \(TDT\)](#) [haplotype-based haplotype relative risk \(HHRR\)](#) [association](#)

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