

研究论文

秦巴山区儿童FRAXE脆性位点CGG重复多态性分布及与智力的相关性分析

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摘要 采用PCR扩增技术和聚丙烯酰胺凝胶电泳技术, 并结合测序, 对秦巴山区随机抽样儿童及不同智力水平儿童的FRAXE脆性位点CGG重复序列进行检测。并把所得的CGG重复数与智测成绩(用韦氏儿童智力量表(C-WISC)进行智力测量)做关联分析。结果表明, FRAXE脆性位点CGG重复的等位基因分布范围在不同地域人群中有所差异, 同一地域人群中等位基因频率分布基本一致; 随机抽样儿童的CGG重复多态性与智力没有相关性($r=0.083$, $P>0.05$), 男性和女性的CGG重复多态性分别与儿童智力也无相关性($r_{男}=0.225$, $r_{女}=-0.041$, $P>0.05$); 在智力低下(MR)、边缘和正常儿童中, CGG重复数值之间也没有显著性差异($F=0.195$, $P>0.05$)。因而认为, 秦巴山区儿童FRAXE脆性位点CGG的正常重复多态性(重复数为8-30)与其智力成绩亦无相关性。

关键词 [FRAXE脆性位点](#) [三核苷酸重复](#) [多态性](#) [智力](#)

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Polymorphism of CGG Repeats in the FRAXE Fragile Site in the Qinba Mountain area Children and Its Association with Intelligence

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Abstract

Abstract: Variations of CGG repeats in the FRAXE fragile site were determined by PCR amplification followed by polyacrylamide gel electrophoresis and sequencing in randomly collected Qinba Mountain Area children whose intelligence level was determined by China-Wechsler Intelligence Scale for Children (C-WISC). Correlations between IQ score and the number of CGG repeats were analyzed. Results indicated a difference in the range of CGG repeats among populations from different regions, but no difference in the distribution of allele frequency in such a population. CGG repeats were not associated with IQ scores in randomly collected subjects ($r=0.083$, $P>0.05$), in males and females ($r_{m}=0.225$, $r_{f}=-0.041$, $P>0.05$), or in subjects with different intelligent levels ($F=0.195$, $P>0.05$). It can be inferred that variation in the size of CGG repeats was not associated with intellectual performance in the Qinba Mountain area children.

Key words [FRAXE site](#) [trinucleotide repeats](#) [polymorphism](#) [intelligence](#)

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