A high-density SNP linkage scan with 142 combined subtype ADHD sib pairs identifies linkage regions on chromosomes 9 and 16

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As part of the International Multi-centre ADHD Genetics project we completed an affected sibling pair study of 142 narrowly defined Diagnostic and Statistical Manual of Mental Disorders, fourth edition combined type attention deficit hyperactivity disorder (ADHD) proband-sibling pairs. No linkage was observed on the most established ADHD-linked genomic regions of 5p and 17p. We found suggestive linkage signals on chromosomes 9 and 16, respectively, with the highest multipoint nonparametric linkage signal on chromosome 16q23 at 99 cM (log of the odds, LOD=3.1) overlapping data published from the previous UCLA (University of California, Los Angeles) (LOD<1, approximately 95 cM) and Dutch (LOD<1, approximately 100 cM) studies. The second highest peak in this study was on chromosome 9q22 at 90 cM (LOD=2.13); both the previous UCLA and German studies also found some evidence of linkage at almost the same location (UCLA LOD=1.45 at 93 cM; German LOD=0.68 at 100 cM). The overlap of these two main peaks with previous findings suggests that loci linked to ADHD may lie within these regions. Meta-analysis or reanalysis of the raw data of all the available ADHD linkage scan data may help to clarify whether these represent true linked loci.
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