Reviewer's report

Title: No Evidence of Association Between Catechol-O-Methyltransferase (COMT) Val158Met Genotype and Performance on Neuropsychological Tasks in Children with ADHD: A case-control study

Version: 1 Date: 4 March 2004

Reviewer: J Hauser

Reviewer's report:

General

The topic of the paper fits nicely into contemporary debate concerning the molecular genetic studies of cognitive function in relation to psychiatric diseases. No association between COMT gene and cognitive functions in children with ADHD were found. The findings are interesting, however, the authors should address some points of criticism.

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Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

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Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

Neuropsychological assessment:
• In their analysis the authors only included methods for evaluation of attention while working memory was not assessed.
• Which subtest of Digit Span were performed: forward, backward or both? The performance of Digit Span test is mostly connected with impairment of attention (especially in children with ADHD), and it is no sensitivity of working memory impairment in children with ADHD. Why the authors do not used WCST which is main tool to working memory evaluation?
• In Egan study WCST for evaluation of working memory and executive functions were used. Their results are not comparable with the results obtained by authors.
• Which kind of CPT were used?
• The neuropsychological assessment was performed once: at school or in laboratory?

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Discretionary Revisions (which the author can choose to ignore)

1) Authors evaluated children with ADHD between 6 and 16 years old. These groups showed higher differentiation, e.g. 6-years children presented different neurological and neuropsychological profile, cognitive and school abilities and also social development compared to 16 years subjects.
2) Who performed diagnosis and psychiatric evaluation? Assessment with CHATTI inventory performed by the telephone, by trained interviewers is associated with risk of increase diagnostic errors.
3) Clinical and demographic data were not adequately addressed. The material is not well balanced as to gender and it would be better not to include 10 females making 8.7% of the sample and to analyze only male patients.
What next?: Accept after minor essential revisions

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No

Declaration of competing interests:
none