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: 7 April 2004

Reviewer: Anil K Malhotra

Reviewer's report:

General: This paper reports on a genetic association study between the COMT Val158Met polymorphism and neurocognitive indices in a cohort of 124 subjects with ADHD. Previous association studies between COMT and the ADHD diagnosis have been negative, but these authors reason that attention to specific neurocognitive tasks may enhance the power to detect subtle genetic effects - as has been observed in prior studies of COMT in schizophrenia and in healthy controls. The study is well-designed, the rationale is strong, the methods are appropriate to test the study question, and the author’s fairly discuss the limitations of their work in the context of prior studies in this area. Finally, the paper is well written, clear and succinct in its presentation of the data.

---------------------------------------------------------------------------------------------------------------------------

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

---------------------------------------------------------------------------------------------------------------------------

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

---------------------------------------------------------------------------------------------------------------------------

Discretionary Revisions (which the author can choose to ignore)

Clearly, power may be an issue here give the small effects observed in prior studies. It would be of interest to know the power of the current study to detect an effect of the magnitude observed by Egan and colleagues.

Second, although the study was restricted to a Caucasian group, it is possible that undetected ethnic stratification could also diminish the power of this study to detect an effect. Perhaps some comment on this and the potential to collect parental DNA from these young subjects to consider family-based association studies in the future could be included.

What next?: Accept after discretionary revisions

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: No
Declaration of competing interests:

None