Reviewer's report

Title: Long-term effects of stimulants on neurocognitive performance in Taiwanese children with attention-deficit/hyperactivity disorder

Version: 1 Date: 13 May 2013

Reviewer: augusto pasini

Reviewer's report:

Dear BMC Editorial Team.

The paper describes empirical findings on the effectiveness of MPH in a Taiwanese ADHD sample. The study is interesting and could represent a contribution to understand long term effect of MPH. The acute effects of MPH in ADHD patients have been investigated in several studies. Nevertheless, even though ADHD patients are usually treated over a long period of time, only a few of these studies considered the prolonged clinical action of MPH.

In this study, authors had the following purposes:
1) better understand the neurocognitive performance measured by WISC-III in ADHD children in Taiwan and further compare the result with health controls;
2) investigate the changes in questionnaires, intelligence quotient and the influences in domains of WISC subtests after long-term methylphenidate (MPH) treatment in Taiwanese children with ADHD;
3) explore if there is more benefit for long-term MPH treatment;
4) know if there is diverse effect of MPH treatment in neurocognitive profiles in different age groups.

After one year of MPH treatment, authors found significant decrement of all scores of the ADHD-Rating scale and CGI-S and increments in several domains of WISC intelligence test, including FIQ, VIQ, PIQ, Perceptual Organization Index (POI), Picture Completion, Picture Arrangement, Object Assembly, and Digit Span. Authors, found better performance in some subtests and subscales of the WISC-III intelligence test (such as Similarities, Comprehension, and Object assembly) in the 6-8 years age group.

Some point need to be addressed in the method section:
1. Information about screening for learning disorders (LD) and history of language disorders. These disorders, especially LD often associated with ADHD, can influence performance on WISCIII in alphabetical and nonalphabetical languages.
2. The Authors should report information about other treatments (i.e. cognitive behavior therapy, parent training, attention training) associated with MPH administration. Furthermore, Authors should discuss different treatment
interactions and their possible effect on the results shown in the article.

3. The authors should update references with following articles:


**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare that I have no competing interests