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EDITORIAL

ADHD diagnosis and treatment: exploring new areas of interest

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We are approaching the data for the launching of the new DSM-5 (http://www.dsm5.org). As expected, the debate on potential alternatives for conceptualizing the disorder is increasing exponentially. Two areas of extreme interest are the possibility of including biomarkers in the diagnostic process and the exploration of ADHD endophenotypes that might bring the phenotypic diagnosis closer to the pathophysiology of the disorder (Thome and Reddy 2009). In this issue, Woodruff et al. (2011) present an interesting study suggesting that a new blood test measuring blood cell membrane potential might have an adequate diagnostic performance to differentiate patients with ADHD from two control groups; one composed by patients with Bipolar I disorder and the other including both subjects with other mental disorders and those without any psychiatric diagnoses. The authors are correct in advising caution in the interpretation of their results before studies with larger samples sizes, standard diagnostic assessments, prevalence rates of ADHD more similar to those found in clinical environments and patients with several other comorbidities be conducted replicating these initial promising findings. Regarding endophenotypes for ADHD, Pineda et al. (2011) assessed children from multigenerational to extended pedigrees that cluster ADHD in a genetic isolate population. They were able to document that some neuropsychological measures (WISC block design, PIQ, FSIQ and continuous vigilance and motor skills measures) differentiated affected and non-affected subjects and presented moderate heritability in this sample. Again, these findings are preliminary in an exploratory study where several neuropsychological measures were applied.

There are several issues in the ADHD treatment arena that have been challenging either clinicians or investigators of the field in the recent years like potential new non-pharmacological interventions for improving attention and working memory (see Johnstone et al. 2010), the need to better understand who are the individuals in the population that use stimulants without a formal ADHD diagnosis and uncertainties about the long-term effectiveness of pharmacological interventions for the disorder in adults and more specifically potential mediators or moderators of long-term effectiveness of medication in this age range. As editors of the *Attention-Deficit Hyperactivity Disorders*, we are happy that some of these important areas of concern are addressed in the current issue. Tucha et al. (2011) conducted an initial study assessing the impact of an attention training program based on a previous established neuropsychological model in improving attentional functioning of a small group of children with ADHD previously medicated. The intervention proposed was feasible to implement in clinical settings with adequate external validity (twice a week sessions per 4 weeks). The findings suggested an additive effect of the program in improving attentional skills in children with ADHD using medications but without full recovery of attentional deficits. Barnard-Brak et al. (2011) assessed a nationally representative sample of 6–12-year-old students with disabilities in the US to answer a very update and intriguing research question: who are the individuals with some ADHD symptoms in the population that use stimulants without a formal ADHD diagnosis? Their findings have immediate implications for mental health policies since they suggest that children with ADHD symptoms but without formal diagnosis receiving stimulants are not different than those with

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formal diagnosis in symptomatic profile. However, the former group is more likely to have insurance plans that do not cover for diagnostic procedures. In fact, since this investigation followed patients in three different assessment points, authors were able to identify that some of those using stimulants without a formal diagnosis eventually received an ADHD diagnosis in follow-up assessments. Finally, Marchant et al. (2011) present interesting findings from a three-year, multicenter, open-label study with atomoxetinein adults reinforcing that clinicians should wait a little bit more to confirm clinical efficacy for this medication, since maximum response was achieved only with 8 weeks of treatment and some patients continued to improve up to 36 weeks. In addition, some of their findings suggest that the presence of emotional dysregulation as part of the ADHD symptoms was associated with a better response to this medication. This is an interesting result since there is a renewed interest in including new symptomatic profiles as part of the core ADHD symptoms for adults in the new classifications systems (see Clare et al. 2010 and http://www.dsm5.org). Thus, emotional dysregulation as part of the construct of ADHD diagnosis in adults is under intense investigation (see Barkley 2010).

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