Attention Deficit Hyperkinetic Disorder (ADHD) from bench side to bedside

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ADHD is a common psychiatric disorder that affects between 8% and 12% of school aged children worldwide while up to 5% of children and 3-5% of adults are affected in USA. Symptoms include inattention, impulsivity and hyperactivity, and in 60% of cases, the symptoms of ADHD endure into adulthood. There are many notions postulated to explain ADHD; among these is dopamine dysfunction. Animal Models are indispensable to comprehend human disorders. For instance using rodent models have enabled us to pinpoint some of neurological changes underlying behavioral aspects of ADHD. There are several animal models for studying ADHD, each one of them has pros and cons; for examples some of these models have decreased dopamine concentration extra-cellular while DA concentration have been increased in other models. Consequently, it is essential to study animal models to fully apprehend the neuropathology and remedy of ADHD. First, I will discuss the neurobiology of ADHD and review a variety of animal models of ADHD. Thenceforth review methods used in the clinical assessment of ADHD, including behavioral measures, cognitive / neuropsychological tests, and psycho physiological/biobehavioral paradigms. The utility of diagnostic measures to predict treatment response will be conferred. Conclusively I will end by discussing the stimulants (e.g. methylphenidate and amphetamines) as the first line of treatment of juvenile and adult ADHD patients. In spite of their effectiveness in managing the core symptoms of the disease, these medications are associated with many adverse events. The presentation will discuss the standard, novel and experimental pharmacological treatments for ADHD.

Biography
Wael Mohamed is a lecturer and head of Neuroscience Unit, Clinical Pharmacology Department at Menoufiya Medical School, Egypt. He earned his MD and MSc from Menoufiya Medical School where he spent his residency in Neurosurgery department. Dr. Mohamed received his Ph.D. (2011) in Neuroscience from the Huck Institutes of Life Sciences, the Pennsylvania State University, USA. As a research psychiatrist and scientist, he pioneered the development of iron deficiency animal model with the possibility of using new pharmacological treatment protocol. He has published several peer-reviewed articles and lot of open articles dealing with the professional development of neuroscience/psychology field in Egypt.

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