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ADHD, Sleep Disorders, and other General Medical Conditions: Recommendations for DSM V

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The diagnosis of Attention Deficit Hyperactivity Disorder (ADHD) in children and adults appears to be increasing in the last couple of decades. A 1996 UN report found an eight fold increase in stimulant use for ADHD in the preceding decade [1]. This increase could be attributed to many causes. In this editorial, I want to point out the possibility of this increase could be, in part, due to misdiagnosis of an underlying primary disorder. A proportion of ADHD patients (diagnosed according to the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV) may have sleep disorders and other medical disorders contributing to a secondary ADHD.

This issue is discussed in this editorial because it may represent an important public health issue. Although it might seem obvious to some clinicians that ADHD is a diagnosis of exclusion, exclusion of sleep disorders or medical causes does not commonly occur in clinical practice before starting patients on long term stimulant medications (with potential burdensome consequences to both adult and pediatric patients). Moreover, using DSM IV criteria as a research tool to include patients in an ADHD clinical trial, for instance, could include a substantial number of patients with ADHD that is due to sleep disorders or other medical disorders.

Lack of attention to this issue is probably due to the fact that the DSM-IV criteria do not include 'ADHD due to General Medical Condition' (GMC) (in contrary to most other psychiatric disorders). This may give the clinician the assumption that ADHD is only a primary diagnosis. The lack of inclusion of such criterion in DSM-IV is perhaps due to the paucity of studies examining this line of research at the time of publication of DSM-IV in 1994.

Nonetheless, in the last several years, there has been accumulating evidence to indicate that patients can suffer from Syndromal and sub-syndromal ADHD due to other causes. These other medical condition may include thyroid disorders [2], periodic limb movement disorder (PLMD) [3], restless legs syndrome [3], and obstructive sleep apnea (OSA) [4-9].

Our group has recently published a systematic review that suggested that 20-30 % of patients diagnosed with ADHD might have OSA [9]. Treatment of sleep apnea resulted in marked improvement in ADHD symptoms. In some cases, stimulant treatment was not required anymore for ADHD symptoms [7,10]. This is analogous, for instance, to mood disorder due to hypothyroidism in which treatment of the primary disorder, hypothyroidism, results in improvement or disappearance of mood symptoms.

The consequence of inaccurate diagnosis may lead to unnecessary use of stimulants or other ADHD medications (and its adverse effects); and lack of treatment of the primary disorder. Perhaps that is what led Sir William Osler to warn that "Diagnosis, not drugging, is our chief weapon of offence." Also, from the Hippocratic perspective, looking at the bigger picture is crucial.

Although data are still emerging concerning ADHD due to GMC, clinicians should be vigilant not to overlook similar kinds of scenarios in a proportion of ADHD patients. It would also be helpful to include this as an exclusion criterion in the next version of DSM (and ICD). Adding it to the formal diagnostic manuals would have a utilitarian value by: (a) avoiding misdiagnoses in this subgroup of ADHD patients by clinicians (b) fostering further studies to better understand and define this crucial issue by researchers.

References

1. Spanos B, Quotas ARCOS (1998) UN report and statistics: conference report; stimulant use in ADHD: Washington, DC.
2. Kooistra L, van der Meere JJ, Vulsma T, Kalverboer AF, et al. (1996) Sustained attention problems in children with early treated congenital hypothyroidism. Acta Paediatr 85: 425-429.
3. Chervin RD, Archbold KH, Dillon JE, Pituch KJ, Panahi P, et al. (2002) Associations between symptoms of inattention, hyperactivity, restless legs, and periodic leg movements. Sleep 25: 213-218.
4. Chervin RD, Dillon JE, Bassetti C, Ganoczy DA, Pituch KJ (1997) Symptoms of sleep disorders, inattention, and hyperactivity in children. Sleep 20: 1185-1192.
5. Weber SA, Lima Neto AC, Ternes FJ, Montovani JC (2006) Hyperactivity and attention deficit syndrome in obstructive sleep apnea syndrome: is there improvement with surgical management? Braz J Otorhinolaryngol 72: 124-129.
6. Avior G, Fishman G, Leor A, Sivan Y, Kaysar N, et al. (2004) The effect of tonsillectomy and adenoidectomy on inattention and impulsivity as measured by the Test of Variables of Attention (TOVA) in children with obstructive sleep apnea syndrome. Otolaryngol Head Neck Surg 131: 367-371.
7. Huang YS, Guilleminault C, Li HY, Yang CM, Wu YY, et al. (2007) Attention-deficit/hyperactivity disorder with obstructive sleep apnea: a treatment outcome study. Sleep Med 8: 18-30.
8. Chervin RD, Ruzicka DL, Giordani BJ, Weatherly RA, Dillon JE, et al. (2006) Sleep-disordered breathing, behavior, and cognition in children before and after adenotonsillectomy. Pediatrics 117: 769-778.
9. Youssef NA, Ege M, Angly SS, Strauss JL, Marx CE (2011) Is obstructive sleep apnea associated with ADHD? Ann Clin Psychiatry 23: 213-224.
10. Naseem S, Chaudhary B, Collop N (2001) Attention deficit hyperactivity disorder in adults and obstructive sleep apnea. Chest 119: 294-296.

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