Adulthood ADHD and Bipolar Disorder

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Attention deficit hyperactivity disorder (ADHD) is a condition that usually has its onset in childhood. Although the disorder persists into adulthood in half of cases, adult ADHD is often not recognized due to different psychopathological characteristics, quite often overlapping with other diagnoses such as mood, anxiety and personality disorders. This is especially true for bipolar disorder (BD), which shares several symptoms with adult ADHD. Moreover, besides an overlapping clinical presentation, BD is often co-occurring in adults with ADHD, with comorbidity figures as high as 20%.

Keywords: ADHD ; bipolar disorder ; comorbidity ; stimulants ; treatment-induced mania

1. Introduction

Attention deficit/hyperactivity disorder (ADHD) is a typical childhood-onset disorder characterized by a deficit of attention and motor hyperactivity leading to significant impairment in academic/occupational, familiar and social functioning [1]. In most cases, adult ADHD has a heterogeneous clinical presentation besides the hyperactivity and inattention described in the pediatric population, which includes a wider spectrum of emotional dysregulation and functional impairment [2].

This diversity in clinical presentation, along with the general dearth of general psychiatrists with ADHD expertise, possibly contributes to the diagnostic gap between children and adults.

Another issue that further complicates the diagnostic process in ADHD adults is the high frequency of comorbid disorders, particularly mood, anxiety, personality and substance use disorders. Among these, bipolar disorders (BD) have overlapping symptomatology that may be frequently mistaken for ADHD, thus substantially contributing to its underdiagnosis and subsequent undertreatment.

2. ADHD and Comorbid Psychiatric Disorders

Several studies have found a high prevalence of comorbid psychiatric disorders in adult ADHD [3][4][5]. The high comorbidity rates may overshadow ADHD presentation, thus hindering the recognition and diagnosis of ADHD in adults. This is acknowledged as one of the main reasons for the observed under-recognition and undertreatment in the adult population [6].

The most frequently represented psychiatric comorbidities are mood and anxiety disorders, substance use disorders (SUD) and personality disorders, with rates for at least one comorbid psychiatric disorder ranging from 57 to 92% [3][5][7][8]. Other authors, adopting a dimensional approach to diagnose ADHD and comorbid disorders, found rates as high as 80% [9].

Mood disorders are especially common in patients with adult ADHD. A large epidemiological study conducted in 20 countries found a 12-month prevalence of major depression in the 15% of adult subjects diagnosed with ADHD [10].

Anxiety disorders are also very common in adults with ADHD, as documented in several studies that reported prevalence rates of anxiety disorders of around 50% [7][8][11].

Several studies have investigated the association between ADHD and personality disorders, finding rates of comorbidity ranging from 10 to 75% in adult ADHD samples [12][13][14][15][16][17]. Among personality disorders, the most prevalent ones are grouped in cluster B, namely borderline and antisocial disorders [18][19]. Symptoms such as impulsivity and emotional dysregulation, sensation seeking and comorbidity with substance abuse overlap in borderline personality disorder and ADHD [13][20].

Similarly, the diagnosis of ADHD put patients at risk for substance abuse and eventually the development of SUDs. Both subjects with ADHD and substance abuse are at increased risk for the other condition, although it is believed that ADHD more often predates the onset of SUDs, since illicit substances are often used as self-medication in the effort to deal with

ADHD symptomatology [21]. The most commonly abused substances among patients with ADHD are nicotine, alcohol, cannabis and cocaine [22][23]. Clinical studies found even high prevalence rates of comorbid SUDs in adults with ADHD [24][25].

3. ADHD and Bipolar Disorder

Bipolar disorder (BD) is characterized by the alternation of mood episodes and variable periods of euthymia, which lead to worse overall functioning and quality of life. Several symptoms encountered in ADHD are common in BD, particularly during elated phases, making differential diagnosis often challenging. However, the existing differences in the phenomenology of the two disorders help guide the clinicians out of the maze. The core ADHD dimension of inattention is present during mood episodes; however, in ADHD it is frequently reported as a tendency to wander from one thought to another, whereas during hypomanic episodes it is often described as a peculiar clarity of thoughts, and during manic episodes it is the consequence of thought acceleration, leading to the typically observed distractibility. The impulsive dimension is also commonly found in BD during euphoric phases, although in those cases it can be often drawn back to inflated self-esteem or grandiosity, eventually leading to underestimating the consequence of actions. Similarly, the inability to stop and relax typical of ADHD can be observed in patients with BD during both anxious depression and manic episodes, although in the latter it usually takes the shape of increased goal-directed activity. Commonalities and differences between ADHD and BD are presented in Table 1. However, besides diagnostic overlapping, ADHD and BD often co-occur, as demonstrated by several studies.

Table 1. Similarities and differences between ADHD and BD.

Characteristic	ADHD	BD
Age at onset	**Childhood**	**Early adulthood**
Course	**Stable**	**Episodic**
Symptoms	• Labile, dysphoric mood • Reduced self-esteem • Distractibility perceived as thought wandering, without objective acceleration • Restlessness, fidgetiness	• Persistently euphoric, elevated or irritable mood • Inflated self-esteem or grandiosity • Distractibility due to acceleration of thought • Increased goal-directed activity
Sleep	**Usually not affected**	**Decreased need to sleep**
Sexuality	**Not affected**	**Increased (hypo- or mania)**
Psychosis	**Absent**	**Possible**

4. Summary

Adult ADHD is often characterized by symptoms such as impulsivity, distractibility and restlessness, which clearly overlap with BD symptomatology, thus making differential diagnosis between the two disorders a challenge. Moreover, ADHD and BD often coexist, as highlighted by several population and clinical studies. Adults with ADHD and comorbid BD are a particularly critical group of patients showing a severe and burdensome clinical picture, with a lower quality of life, a higher number of mood episodes, an increased prevalence of substance abuse and dependence, and a worse overall functioning. In spite of that, only a few studies have investigated the best treatment modalities in these complex patients, therefore recommendations should still be considered as preliminary. In short words, when ADHD and BD co-occur, mood stabilization should be the first goal of treatment. When a mood stabilizer is in place, the augmentation with stimulant medications is effective in ameliorating the ADHD symptomatology. In these cases, the possibility of a treatment-emergent (hypo)manic switch should be taken into account, although emergence is uncommon when proper mood stabilization is in place. Finally, adults with ADHD and comorbid bipolar depression may benefit from the use of lisdexamfetamine.

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