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The Subgroup Effect of Adult Attention Deficit Hyperactivity on Disability and Quality of Life Among Bipolar Patients

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ÖZET:

İki uçlu hastalarda, erişkin dikkat eksikliği ve hiperaktivite alt boyutlarının yetiyitimi ve yaşam kalitesi üzerine etkisi

Amaç: Bu çalışmanın amacı, dikkat eksikliği ve hiperaktivite bozukluğu alt boyutlarının iki uçlu bozukluğun seyri, yeti yitimi ve yaşam kalitesiyle ilişkisini değerlendirmektir.

Yöntem: Bu çalışmada Erenköy Ruh ve Sinir Hastalıkları Hastanesine olağan kontrolleri için başvuran, DSM-IV kriterlerine göre iki uçlu bozukluk tanılı ötimik 150 hasta değerlendirilmiştir. Ötimi şartı için Hamilton Depresyon Derecelendirme Ölçegi ve Young Mani Değerlendirme Ölçegi uygulanmıştır. Dikkat eksikliği ve hiperaktivite bozukluğunun alt boyutlarının değerlendirilmesi için Erişkin Hiperaktivite Değerlendirme Ölçeği uygulanmıştır. Ölçek yönergesinin olanak sağladığı biçimde hastalar, dikkat eksikliği hiperaktivite bozukluğunun alt boyutlarından; dikkat eksikliği boyutu (DB), hiperaktivite boyutu (HB), dikkat eksikliği ve hiperaktivite boyutu bulunanlar (DHB) ve eşlik eden özelliği olmayan saf iki uçlu bozukluk (İUB) hastaları seklinde dört gruba ayrılmıştır. HB boyutunu bulunduran olguların sayıca azlığı nedeniyle karşılaştırmalar üç grup arasında yapılmıştır. Hastalara yeti yitim düzeylerini belirlemek için İşlevselliğin Genel Değerlendirme Ölçeği (İGDÖ) (Global Assessment Schedule – GAS) ve yaşam kalitesini değerlendirmek için Dünya Sağlık Örgütü Yaşam Kalitesi Ölçeği (WHOQOL) uygulanmıştır.

Bulgular: Çalışmamızda iyilik dönemindeki İUB hastaların %20'sinde, dikkat eksikliği ve hiperaktivite belirtileri bulunmuştur. Hiperaktivite bileşeninin olmadığı, yalnızca dikkat eksikliği boyutunun bulunduğu hasta grubu, İUB hastalarının %21.3'ünü oluşturmuştur. DHB grubu hastalarında başlangıç yaşı ve atak sayısı daha düşük, yatış sayısı ise daha yüksek bulunmuştur. İGDÖ puanı saf İUB grubunda diğerlerinden daha yüksek bulunurken, yaşam kalitesi yönünden psikolojik alandaki bozulma DB alt boyutunda, çevresel alandaki bozulma ise DHB boyutunda daha belirgindir.

Sonuç: İki uçlu bozuklukta, dikkat eksikliği ve dikkat eksikliği hiperaktivite boyutlarının birlikte bulunması, hastalığın yeti yitimini arttırmakta ve yaşam kalitesini bozmaktadır.

Anahtar sözcükler: iki uçlu bozukluk, dikkat eksikliği hiperaktivite bozukluğu, yeti yitimi, yaşam kalitesi

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ABSTRACT:

The subgroup effect of adult attention deficit hyperactivity on disability and quality of life among bipolar patients

Objective: The aim of this study was to evaluate the relationship between attention deficit and hyperactivity disorder sub-dimensions and the course of Bipolar Disorder, disability and quality of life.

Method: In this study 150 euthymic patients attending the Erenköy Research Hospital of Psychiatric and Neurological Diseases for routine follow-ups, who had a diagnosis of bipolar disorder according to the DSM-IV criteria, were evaluated. Considering that they were euthymic patients, the Young-Mania Scale and the Hamilton Depression Rating Scale were applied, respectively. The Adult Attention Deficit and Hyperactivity Rating Scale was applied to evaluate the attention deficit and hyperactivity disorder subdimensions. The patients were divided into four groups in terms of the scale scores, sub-dimensions of attention-deficit hyperactivity disorder, attention deficit (AD), hyperactivity (HD), attention deficit and hyperactivity (ADHD) and the accompanying form of non-pure BD patients. Three groups were compared, because the number of patients with HD was limited. The General Assessment of Functioning Scale was applied to determine their level of disability in patients subduction - IGDO (Global Assessment Schedule - VAS) and the World Health Organization Quality of Life Scale was applied to assess quality of life (WHOQOL).

Results: In our study, 20% of BD patients in a euthymic period had symptoms of attention deficit and hyperactivity. Hyperactivity is not component, where only the size of the group of patients is the lack of attention, 21.3% of BD subgroup had sole attention deficit subdimension without hyperactivity component. Relatively, the age of onset and the number of episodes were lower and the number of hospitalizations was higher in the ADHD subgroup. IGDO scores were relatively higher in the BD subgroup while the GAS scores were the highest in the pure BD subgroup and the quality of life variables were more impaired than others in the ADHD subgroup.

Conclusion: In bipolar disorder, collocating attention deficit and hyperactivity dimensions increase disability and impair quality of life.

Keywords: bipolar disorder, attention deficit hyperactivity disorder, disability, quality of life

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INTRODUCTION

Bipolar disorder (BD) is a disturbance that can cause significant psychosocial impairment and disability[1]. BD has been recognized by the World Health Organization (WHO) as one of the major psychiatric disorders in eighth place in the list of diseases leading to social disability[2]. Studies have demonstrated a lifetime prevalance of 0.5-1.5% in society. Epidemilogical studies have revealed a social exposure of 6%[3]. Courses of disease have high comorbidity and mortality rates.

Attention-deficit (AD) and hyperactivity disorder (HD) comorbidity has been observed in 20 – 30% of adult BD patients[4]. Concomitance of ADHD and BD symptoms can cause diagnostic confusion. Attention and thought seduction, impulsivity, hyperactivity and mood tampering are characteristic for both disorders. For this reason, elucidation of the relationship between the two disorders is a necessity[5-8]. Early systematic studies carried out in children and adolescents have demonstrated an ADHD occurrence rate of 57-98% among bipolar children[9], and 22% of hospitalized ADHD patients have been found to have comorbid bipolar disorder[10]. Family studies in ADHD and BD, have suggested a possible familial connection[11]. ADHD comorbidity was observed in more than 90% of bipolar patients with pre-adolescent onset (12). It has been proposed that BD occurs in 16% of ADHD children[13].

In BD, the existence of attention deficit and hyperactivity disorder is a very important factor that complicates the usual symptomatology, negatively impacts the course of the disease, adversely affects the quality of life and distorts functionality. Evaluation of BD patients, in particular those with comorbid ADHD and ADHD subdimensions, will provide important data that might be useful for clinical follow up and for determining approaches in terms of functionality and quality of life. The purpose of this study was to examine the attention and hyperactivity sub-dimensions of ADHD and assess their effects on disability and quality of life in euthymic BD cases.

METHODS

Sample

One hundred and fifty (150) euthymic patients (18-65 years old) with a diagnosis of bipolar disorder according to DSM-IV criteria, who had been under routine control at Erenköy Research Hospital of Psychiatric and Neurological Diseases ambulatory treatment center were included in the study after giving their informed consent.

Administration

The Adult Attention Deficit and Hyperactivity rating scale was given to all BD patients. Diagnostic interviews were done using the SCID-I and euthymia was confirmed by the Hamilton Depression rating Scale (HDS) and the Young Mania rating Scale (YMS). Cases with a HDS score of 8 or less and a YMS score of 5 or less were considered to be euthymic. The Global Assessment Schedule (GAS) was applied to patients to assess the level of disability and the World Health Organization Quality of Life Scale (WHOQOL) was applied to evaluate the quality of life.

Adult Attention Deficit and Hyperactivity rating Scale directives enable grouping of patients and classifying them into attention deficit hyperactivity disorder subdimensions in four main groups; attention deficit dimension (AD), hyperactivity dimension (HD), attention deficit and hyperactivity dimension (AHD) or pure BD. Due to the low number of cases in the HD subdimension, comparisons were made between three groups. The groups were compared in terms of age, gender, educational level, marital status, substance use disorder, age of onset of BD, disease duration, episodes, hospitalization number, GAS scores, disability and WHOQOL-BREEF quality of life features.

Apparatus

Structured Clinical Interview for DSM – Axis I Disorders (SCID – I) form Turkish Sample.

Hamilton Depression Rating Scale (HDS): The validity and reliability of the Turkish version of this rating scale for depression level and intensity was developed by Akdemir et al.[14].

Young Mania Rating Scale (YMS): This scale was used to confirm the manic symptoms severity and euthymic state in the pre-treatment phase of wellness period. The scale was developed by Young et al. The form should be filled out by the interviewer. The validity and reliability of the Turkish version was demonstrated by Karadağ and colleaques[15].

Adult Attention Deficit and Hyperactivity Rating Scale: Scores 0 and 1 are considered to be negative while 2 and 3 are positive. In the first section, the positive criteria benchmark is called "attention deficit forefront" with a score of 6 or more. In the second section, the positive criteria benchmark is called "extreme mobility and impulsivity forefront" with a score of 6 and over. In cases where the total score of the first and the second parts is 12 or more, the benchmark is called "compound ADHD". Higher scores indicate greater psychopathology[16].

Global Assessment Schedule (GAS): This scale is used to evaluate the individual's overall functionality. For unipolar (77.27) and bipolar disorder groups (72.85) moderate difficulty in experiencing was observed with GAS. No difference was reported between unipolar and bipolar schizoaffective disorders. Functionality level in schizophrenic disorder is at a degree reflecting severe disorder.

World Health Organization Quality of Life (WHOQOL-BREEF): This scale has 4 dimensions (WHOQOL-F: Physical Health Related Life Quality, WHOQOL-P: Psychological Quality of Life, WHOQOL-S: Social Relations Related Life Quality and WHOQOL-C: Environmental Life Quality), This 26 point scale has been improved with the participation of our country to measure physical, mental, social and environmental wellnes[17].

Statistical Analysis

Statistical analysis was performed using the SPSS (version 16.0) software for Windows. One hundred and forty=-six (146) patients were included in the analysis. Frequency schedules, descriptive statistics for numeric variables (mean, standard deviation, median, minimum, maximum) for categorical variables were presented. For the categorical group comparisons, significance levels were measured by the Chi-Square test with cross table statistic imputs. The Bonferroni method was applied tor numerical comparisons between the post-hoc analyses groups. The HD, AD, AHD and pure BD patients form four groups; however, due to the presence of only 4 patients in the HD group, comparisons were made between three groups. Statistical significance level was set as $p<0.05$.

RESULTS

Out of all the patients, 32 (21.3%) had AD, 4 (2.7%) had HD, and 30 (20%) had attention deficit and hyperactivity disorder. The remainder of the patients (56%) showed no ADHD related symptoms.

Demographic data for 146 patients are given in Table 1, classified in the subgroups mentioned

Table 1: Comparison of sociodemographic features

	AD	ADHD	Pure BD	F	p
Age (Mean±SD)*	48.3±10.3	37.3±11.9	44.7±12.2	7.139	0.001
Education (Mean±SD) (year)	5.7±4.4	8.8±2.8	7.6±4.1	1.234	0.06
Gender, (%), (G/B)	56.3/43.7	53.3/46.7	64.3/35.7	1.321	0.514
Marital status, (%), (married/single)	61.3/38.7	40/60	57.1/42.9	0.521	0.649

*Post Hoc test: ADHD<AD=Pure BD.

Table 2: Comparison of clinical features

	AD	ADHD	Pure BD	F	p
Age of onset (Mean±SD)*	33.5±13.2	25.4±9.9	30.4±12.2	3.621	0.029
Duration of illness (Mean±SD)	28.8±9.7	23.2±7.1	27.0±11.1	0.765	0.838
Number of episodes (Mean±SD)**	2.9±1.1	2.2±1.4	2.6±1.1	3.351	0.038
Duration of episodes (Mean±SD) (month)	2.5±0.9	2.7±0.9	2.4±0.8	0.532	0.681
Number of hospitalization (Mean±SD)***	2.2±1.4	3.2±1.1	2.2±1.2	7.736	0.001
Duration of using mood stabilisator (Mean±SD)	2.5±1.6	2.5±1.1	2.5±1.1	0.006	0.994

*Post Hoc test : ADHD<AD; **Post Hoc test: ADHD<AD; ***ADHD>AD=Pure BD

Table 3: Comparison of functionality and quality of life

	AD	ADHD	Pure BD	F	p
GAS (Ave±SS)*	61.7±10.6	58.7±11.7	69.3±16.8	7.11	0.001
WHOQOL- S*	17.9±3,7	20±3.6	22.0±4.9	10.486	0.002
WHOQOL-F	20.4±3.4	21.9±3.8	23.3±4.5	5.858	0.068
WHOQOL-C**	13.3±3	14.1±3.1	17.4±3.2	24.591	<0.001
WHOQOL-P***	20.5±2.9	22.2±4	24.7±3.5	17.572	<0.001

GAS: Global Assessment Schedule, WHOQOL-F: Physical health related life quality, WHOQOL-P: Psychological quality of life, WHOQOL-S: Social relations related life quality, WHOQOL-C: Environmental life quality,
*Post Hoc test: Pure BD>ADHD=AD, **Post Hoc test: Pure BD>ADHD=AD; ***Post Hoc test: Pure BD>ADHD>AD; ****Post Hoc test: Pure BD>AD;
Other comparisons are not meaningful.

above. The average age of the ADHD group is lower than that of the other groups (F=7.139; df=3; p=0.001).

The age of onset of ADHD is also lower than other groups (F=3.621; df=3; p<0.05) (Table 2). Among the subgroups, the number of episodes is the highest in the AD subgroup (F=3.351; df=3; p=0.038), while the number of hospitalization was found to be higher in the ADHD group (F=7.736; df=3; p=0.001).

GAS scores of the pure BD group were found to be higher than the others (F=7.11; df=3; p=0.001) (Table 3). In pure the BD subgroup, the WHOQOL-S value of the pure BD group compared to the AD and ADHD groups (F=10.486; df=3; p=0.022), the WHOQOL-C value compared to the AD group, the WHOQOL-C value of the AD group in comparison to the ADHD group (F=24.591; df=3; p<0.001) and the WHOQOL-P value in pure the BD group compared to the AD group were found to be higher (F=17.572; df=3; p<0.001).

DISCUSSION

Through adult BD patients, showing ADHD symptoms, who had no diagnosis during chilhood, we aimed to investigate the course of comorbid ADHD symptoms using ADHD subdimensions rather than an ADHD diagnosis. Among 150 euthymic patients, 32 (21.3%) had an attention deficit sub-dimension, 4 (2.7%) had a hyperactivity sub-dimension and 30 (20.0%) had both attention deficit and hyperactivity sub-dimensions. We found the prevalence rates to be consistent with previous studies[5,20,21,22]. As reported in the literature, while attention deficit and hyperactivity symptoms coexistence rates decrease as years go by, the incidence of attention deficit alone increases with time. In parallel with these two findings, it is clearly seen that in BD patients, HD problems occur at younger ages and AD problems continue with time[5,18,19].

Among participants, the age of onset of BD ranged from 15 to 49, while in the ADHD group the average age of onset was lower. This situation can be interpreted that ADHD brings the age of onset of BD down as shown in the literature[18,19]. From another point of view, the presence of attention deficit and hyperactivity symptoms in these patients may be useful for early diagnosis and early referral for psychiatric treatment.

In our study, contrary to our expectations, the

number of episodes in the AD subgroup was higher than that of the ADHD group. This remarkable finding may be due to lack of mood period recognition and comprehension in the ADHD group[19]. However, it was found that the number of hospitalizations in ADHD group was higher than in the pure BD and AD groups. Against episode number rarity, hospitalization number multitude pointed at an episode severity of AD and ADHD among BD cases. The literature provides data supporting the idea that the existence of ADHD increases episode severity in BD[18].

Increased numbers of episodes and severity, affect functionality negatively in BD cases[20]. It could be a way of coming out disruptive effects of ADHD symptoms on BD functionality. Indeed in pure BD, the GAS scores were higher than in the other groups. The GAS scores were not different between the AD and ADHD subgroups and in BD, presence of AD and ADHD subgroups, affect functionality negatively.

In our study in pure the BD subgroup, life quality social relationship scores were higher than the AD and ADHD subgroups, whereas< AD and ADHD scores were similar. In the field of physical health, no statistically significant difference was observed between groups. The pure BD subgroup had higher physical health life quality environmental scores than the AD and ADHD groups. The AD subgroup was found to have higher scores than ADHD. AD and presence of ADHD creates social problems, ADHD disrupted environmental life quality. In the pure BD group, the psychological score is higher than the AD and the ADHDgroups. In this regard, it could be interpreted that hyperactivity had no negative impact on psychological state. Although it is mentioned that BD comorbidity adversely affects life quality[21], for the first time we found that social and environmental life qualities are affected adversely by the ADHD subdimentions of BD. While, negative effect of AD on psychological section was ahead of ADHD, a dominant negative impact of ADHD on environmental section was observed.

As a result, AD and ADHD symptoms negatively affect functionality and lead to a deterioration in the quality of life in BD. The psychological distortion in the AD subdimension and the environmental deterioration in ADHD were most prominent. An important restriction of our study was that the mean ages of the groups were not comparable. However, the fact that disease duration was not different between groups might compensate for this limitation. The relationship between AD and ADHD symptoms and BD in terms of psychotic findings, clinical features and treatment could be a topic of interest for future studies.

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