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OCCURRENCE AND PREDICTIVE FACTORS OF PSYCHIATRIC COMORBIDITY IN INDIVIDUALS WITH ALCOHOL USE DISORDERS.

ALKOL KULLANIM BOZUKLUĞU OLAN HASTALARDA PSİKİYATRİK KOMORBİDİTE OLUŞUMU VE YORDAYICI FAKTÖRLER

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Summary

Alcoholism is a disorder caused by an excessive and maladaptive pattern of alcohol consumption. A series of impairments can arise from such consumption, including psychiatric comorbidities. The objective of this study was to evaluate the rate of occurrence of anxiety and depression comorbidities in alcoholics and to investigate the associations of such comorbidities with the dose of ingested alcohol, period of alcohol use, personality traits and the presence of early emotional trauma. The sample consisted of 110 alcoholics, evaluated by the Structured Clinical Interview for DSM-IV (SCID-IV – clinical version) and recruited at the Hepatopathy Outpatient Service of a University Hospital. Data collection was individual and took place through the application of self-evaluation instruments. Statistical analysis was performed using parametric statistics with a significance level of $p \leq 0.05$. The main results showed that 46.3% of alcoholics had psychiatric comorbidities with mood disorders and/or anxiety. In addition, according to the logistic regression model, the increase in the doses of alcohol ingested and the presence of early emotional traumas were risk factors for the development of such comorbidities in alcoholics: (ODDS=1.18; p=0.005) and (ODDS=1.17; p=0.001), respectively. These data indicate the need for early intervention with regard to the primary care of both alcoholics who suffered early trauma and alcoholics who ingest large amounts of alcohol daily to decrease the risk of psychiatric comorbidities in this high-risk group.

Keywords: Alcoholism; psychiatric comorbidity; early trauma; depression; anxiety.

Özet

Alkolizm, alkol tüketiminin aşırı ve uygunsuz şekilde kullanılmasının neden olduğu bir bozukluktur. Böyle bir tüketimden, komorbid psikiyatrik bozukluklar dahil, bir dizi bozukluk ortaya çıkabilir. Bu çalışmanın amacı, alkoliklerde anksiyete ve depresyon görülme oranını değerlendirmek ve bu tür komorbiditeler ile alınan alkolün dozu, alkol kullanım süreci, kişilik özellikleri ve önceden duygusal travmanın varlığı arasındaki bağlantının incelenmesidir. Çalışmanın örneklemi, DSM-IV için Yapılandırılmış Klinik Görüşme (SCID-IV- klinik versiyon) ile değerlendirilmiş, bir üniversite hastanesinin Hepatopati biriminde ayaktan tedavi servisinden alınmış 110 alkolikten oluşmaktadır. Veriler bireysel olarak ve öz-değerlendirme ölçeklerinin uygulanmasıyla elde edilmiştir. İstatistiksel analizler $p \leq 0.05$ anlamlılık düzeyinde parametrik istatistikler kullanılarak gerçekleştirilmiştir. Çalışmanın ana sonuçları, alkoliklerin %46.3'ünde duygudurum bozuklukları ve/veya anksiyete ile psikiyatrik komorbidite olduğunu göstermiştir. Buna ek olarak, lojistik regresyon modeline göre, alınan alkol dozundaki artış ve önceden duygusal travmanın varlığı alkoliklerde bu tür komorbiditenin gelişmesi için risk faktörleridir: sırası ile (ODDS=1.18; p=0.005) ve (ODDS=1.17; p=0.001). Bu veriler, hem önceden travmanın varlığından zarar görmüş alkoliklerden, hem de günlük yüksek miktarda alkol tüketen alkoliklerden oluşan yüksek risk grubunda psikiyatrik komorbidite riskini azaltmak için birinci aşama tedavi ile ilgili olarak erken müdahaleye ihtiyaç olduğunu göstermektedir.

Anahtar Kelimeler: Alkolizm; psikiyatrik komorbidite; erken travma; depresyon; anksiyete.

1. Introduction

Alcoholism is a highly prevalent disorder caused by an excessive and maladaptive pattern of alcohol consumption (American Psychiatric Association, 2013). According to the World Health Organization (2004), two billion people in the world ingest alcohol, and 76.3 million of them have some type of disorder related to alcohol use, which is associated with social, financial and clinical losses.

Among the clinical aspects, comorbidity with other psychiatric disorders, such as mood disorders and anxiety, is prevalent. Clinical studies by Vicente et al.. (2001), Gratzer et al. (2004) and Ndetei et al. (2012) show comorbidity rates with mood disorders and anxiety ranging between 32% and 80%. These rates represent important clinical impacts and implications with regard to the treatment and prognosis of both disorders (Greenfield et al., 1998; Haver, 2003; Morley et al., 2013).

There are several different variables that may favor the

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associations between alcoholism and different psychiatric comorbidities, including the presence of genetic factors (Wang et al., 2004; Baigent, 2005), early emotional traumas (Fergusson et al, 2008), increased alcohol consumption (Logue, 1978; Morley et al., 2013), the influence of gender (Zilberman et al., 2002) and even the onset of alcohol withdrawal syndrome (Schuckit & Monteiro, 1988; Schuckit & Hesselbrock, 1994).

In this context, the objective of this study is to evaluate the rates of comorbidity with anxiety and depression in a sample of active alcoholics with clinical comorbidities at the liver level. Additionally, the associations of this condition with alcohol doses ingested, period of alcohol consumption, personality traits and the presence of early emotional traumas is analyzed.

2. Methods

2.1. Subjects

The sample consisted of 110 male patients over 18 years of age under treatment for alcoholic liver disease (hepatopathy and/or cirrhosis of the liver) in a University Hospital Center. All patients were diagnosed with alcohol dependence according to the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV), module E, applied via the Structured Clinical Interview (SCID-IV-clinical version).

2.2. Instruments

2.2.1. Structured and Clinical Interview for DSM-IV (SCID-IV - Clinical Version) – developed by First et al. (1996) and translated, adapted and validated for the Brazilian Population by Del-Ben et al. (2001).

2.2.2. Beck Anxiety Inventory (BAI) – developed by Beck and Steer (1993). Translated, adapted and validated for the Brazilian population by Cunha (2001). This self-administered instrument consists of 21 items that evaluate the severity of anxiety symptoms, which are scored on a Likert scale between zero and four. We considered a score above 20 as an indicator of pathological anxiety.

2.2.3. Patient Health Questionnaire (PHQ-9) – a self-rating instrument consisting of nine items based on the criteria of major depression proposed by the DSM-IV. The version translated and validated for Brazilian Portuguese was used in this study (De Lima Osório et al, 2009). We considered a score greater than or equal to 10 as an indicator of depressive symptoms.

2.2.4. Early Trauma Inventory Self Report – Short Form (ETISR-SF) – a self-rating instrument consisting of 27 items divided into four dimensions (general trauma, physical abuse, emotional abuse and sexual abuse) and scored on a dichotomous scale (yes/no). It was translated and adapted for the Brazilian population by Osório et al. (2013).

2.2.5. Revised NEO Five Factor Inventory – Short Form (NEO-FFI-R) – a self-rating instrument, proposed by Costa Júnior and McCrae (1985) and translated and validated for Brazilian sample by Costa Júnior and McCrae (2007), consisting of sixty items, scored on a Likert scale of zero to four points, which provide indicators of personality characteristics based on the Theory of the Five Factors (Conscientiousness, Neuroticism, Extraversion, Openness, Agreeableness).

2.3. Data Collection and Analysis

The data were collected individually and included in a database. The data were analyzed using parametric statistics, namely, a-) descriptive statistics to analyze the sociodemographic and clinical characteristics of the sample; b-) the Chi-square test and Student's t-test to compare groups; and c-) logistic regression to analyze predictive variables. The level of significance adopted was $p<0.05$.

The study was conducted in accordance with Declaration of Helsinki Research Ethic and was approved by the local ethics committee (Process HCRP no. 2316/2011).

3. Results

The sample consisted of 110 male subjects diagnosed with alcohol dependence. The average age was 53.78 years (SD=8.24), and 58.2% of subjects were married (N=64), 21.8% were widowers and/or divorced (N=24) and 20% were single (N=22). Education level varied, with a preponderance of subjects who completed elementary school (68.2%; N=62). With regard to employment, only 43.6% (N=48) of subjects were actively working. Clinically, 77.2% (N=85) of the sample had a diagnosis of cirrhosis of the liver due to alcohol, while the rest (27.8%; N=25) had other alcohol-related hepatopathies.

With regard to the presence of psychiatric indicators related to depression and anxiety, 46.3% (N=51) of subjects had signs and symptoms of depression and/or pathological anxiety, while 18.2% (N=20) had both conditions simultaneously. Separately, the rate of occurrence of depression indicators was 31.8% (N=35) and of pathological anxiety indicators was 33.7% (N=36).

Based on these rates, the subjects were separated into two different groups, one with psychiatric comorbidity (N=51; G1) and the other with no such condition, 64.9% (N=59; G2). The groups were compared with regard to certain sociodemographic indicators, and the results are displayed in Table 1.

According to Table 1, the groups differ in two variables: the presence of previous psychiatric treatment and employment status. With regard to the former, subjects in G1 underwent more psychiatric treatments than subjects in G2. Moreover, with regard to employment status, G1 had more inactive individuals than G2.

Table 2 compares the groups with regard to different clinical indicators. Accordingly with comorbidities have been alcoholics for a shorter period of time, ingested more doses of alcohol/day and experienced more emotional traumas in childhood than subjects with no comorbidities. Personality characteristics did not differ between groups.

When the regression model composed of the clinical indicators studied (listed on Table 2) was analyzed, a final model consisting of the variables alcohol doses/day (ODDS=1.18; p=0.005) and early emotional trauma (ODDS=1.17; p=0.001) was obtained. According to this model, the increase in doses ingested and the presence

Table 1: Sociodemographic characteristics of the subjects according to the presence or absence of psychiatric comorbidity.

Variables		G1 (N=51) N	%	G2 (N=59) N	%	Statistics
Age/ Years	X (DP)	52.57	(7.30)	54.83	(8.89)	t=1.44; p=0.15
Level of education	ES	30	58.8	32	54.2	
	SE	18	35.2	18	30.5	x^2=2.49; p=0.28
	HE	3	5.8	9	15.2	
Professional Status	Active	17	33.3	31	52.5	
	Inactive	34	66.3	28	47.5	x^2=4.10; p=0.04*
Civil Status	Single	11	21.5	11	18.6	
	Marriage	29	56.8	35	59.3	x^2=0.14; p=0.92
	Widow/Divorced	11	21.5	13	22.0	
Psychiatric treatment	No	38	74.5	54	91.5	x^2=5.78; p=0.01*
	Yes	13	25.4	5	5.05	

Notes: N = frequency; (%) = percent; p = level of significance; X = average; SD = standard deviation; x^2= chi-Square test; ES = elementary school; SE = secondary education; HE = higher education/college; * = statistically significant; G1 = alcoholics' groups with psychiatric comorbidity; G2 = alcoholics' groups without psychiatric comorbidity.

Table 2: Clinical characterization of subjects according to the presence or absence of psychiatric comorbidity.

Variables		G1 (N=51) X (SD)	G2 (N=59) X (SD)	Statistics
	Time of alcoholism/Years	27.45 (10.5)	31.02 (11.7)	t=1.66; p=0.01*
	Doses of alcohol /day	9.04 (5.8)	6.42 (2.6)	t=-2.98; p<0.004*
	Early Emotional Trauma	10.47 (6.0)	6.59 (5.2)	t=-3.59; p<0.001*
	Openness (O)	13.04 (3.7)	14.12 (3.6)	t=1.54; p=0.13
Personality Factors	**Agreeableness (A)**	13.84 (4.0)	14.71 (5.7)	t=0.90; p=0.37
	Conscientiousness (C)	9.12 (4.6)	10.41 (7.1)	t=1.10; p=0.27
	Extraversion (E)	13.06 (3.3)	14.32 (5.0)	t=1.56; p=0.12
	Neuroticism (N)	13.31 (4.4)	13.22 (5.1)	t=-0.10; p=0.92

Notes: p = level of significance; X = average; SD = standard deviation; t = student's t-test; * = statistically significant; G1 = alcoholics' groups with psychiatric comorbidity; G2 = alcoholics' groups without psychiatric comorbidity.

of early emotional trauma are risk factors for the development of the psychiatric comorbidities studied in alcoholic patients.

4. Discussion

This study evaluated, among other aspects, the rate of occurrence of alcoholism comorbidities with indicators of mood disorders and/or anxiety.

In this context, the high rates of comorbidity occurrence found in this study, approximately 46.3%, are important. These rates are much higher than the ones found by Almeira-Filho et al. (2007), for example, who found anxiety rates of approximately 15.2% and depression rates of 13.4% in subjects who consumed alcohol daily. Additionally, with regard to impairment, the sample in the Almeira-Filho et al. (2007) study is believed to be better preserved, minimizing the impacts of other clinical conditions on physical condition, quality of life or even mood. Moreover, the sample consisted of individuals from the general population who did not necessarily fulfill the diagnostic criteria of alcohol dependence because such dependence was evaluated only by scales and questionnaires about alcohol consumption habits.

However, when the statistics from our study are compared to other clinical studies involving subjects diagnosed with alcohol dependence, differences in the opposite direction to the ones found in this study are observed. This difference is because in this study, rates substantially lower than the values in the study by Vicent et al. (2001) were found. Vicent et al. (2001) found occurrence rates of 78% moderate or severe depression among alcohol dependents, 20% moderate anxiety and 80% severe anxiety, evaluated by screening instruments different from the ones used in this study. In addition, in the study by Ndetei et al. (2012), the rate of alcohol dependence diagnosis associated with the presence of depression comorbidities reached approximately 63.8% of the sample. Such differences may be explained by the fact that the first study had a sample of alcoholic subjects hospitalized in gastroenterology and psychiatric wards, which had higher rates of impairment. Such impairments could be observed both at the time of data collection, considering the clinical need for a hospitalization treatment regimen and the experience of stress factors associated with alcoholism, and in the long term because the rate of suicide attempts in the sample was 30%.

In the second study, however, the difference may be explained by the fact that the sample was recruited in a rehabilitation center, where 22% of the sample made use of other psychotropic substances, which may contribute to a higher level of mood disorders.

With regard to the variables studied, both early emotional trauma and the number of alcohol doses ingested per day are important risk factors for the association between alcoholism and psychiatric comorbidities. These findings corroborate previous studies, which showed that individuals exposed to adverse experiences during childhood (Fergusson et al 1996; Anda et al., 2002; Fergusson et al., 2009) or who consumed a high number of alcohol doses (Logue, 1978; Boden & Fergusson, 2011; Morley et al., 2013) had an increased risk for the

development of alcoholism conditions associated with psychiatric comorbidities in adult life.

In contrast to findings by Kotov et al. (2010), no association with personality traits was found. Kotov et al. (2010) observed that alcoholics with psychiatric comorbidities displayed greater neuroticism and less conscientiousness. A possible explanation for the absence of such evidence in this study may be the low score displayed by both groups for these two traits (approximately 20 points below the average score found in the normative study by Costa Júnior & McCrae, 2010), which may have prevented differences from being observed.

Ultimately, the results of this study have important clinical implications because of the high rates of co-occurrence of disorders with the observed risk variables. Thus, the need for early intervention in alcoholic subjects who suffered early traumas and/or who ingest large doses of alcohol is important and may contribute to a decrease in the presence of disorders and/or pathological symptoms of mood changes. Such a decrease is essential because the presence of psychiatric disorder indicators strengthens the existing barriers to the treatment of alcohol dependence and increases the clinical, social and economic losses experienced both at the individual and societal levels (Haver, 2003; Fergusson et al 2009; Morley et al., 2013). Therefore, integrated treatments that focus not only on the treatment of dependence but also on the reduction of further impairments are necessary. Moreover, the specific treatment of mood disorders and anxiety is also necessary, considering that in this study, only 25% of the subjects with comorbidities had received previous treatment for these conditions.

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