

DEPRESSIVE SYNDROMES ASSOCIATED WITH ALCOHOL DEPENDENCE

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Abstract

Objective: Depressive syndromes (DSs) are some of the most common mental disorders in individuals suffering from alcohol dependence (AD). The aim of the study was to investigate the characteristics of DSs associated with AD in a group of inpatients admitted in a psychiatric hospital.

Method: One hundred sixty inpatients between 25 and 58 years of age (mean \pm SD: 37.30 \pm 7.97), suffering from AD and DSs and recruited from a larger clinical sample, were included. They were evaluated by means of a battery of diagnostic/rating scales for assessment of both diagnosis and symptoms severity.

Results: Complete physical and psychiatric examinations of AD patients showed that DSs represent a very heterogeneous group that can be divided in: psychogenic (66.3%), endogenous (11.3%), organic (22.4%), and mixed. The following clinical depressive subtypes could be identified: hypochondriac (42.5%), asthenic (20.6%), agitated (19.4%), dysphoric (8.8%), simple (4.35%), and apathetic (4.35%).

Conclusions: Our study indicates that DSs during AD represent a constant association that frequently complicates the clinical pictures, induces low quality of life and personal adjustment, and impairs remission. Investigation of the casual and intertwined factors, developmental patterns and clinical structure of the AD-associated DSs should allow optimizing a tailored and integrated system of medical rehabilitation help.

Key words: alcohol dependence, depressive syndromes, comorbidity, clinical features, alcohol use, personality

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Introduction

Nowadays alcoholism is an increasing problem all over the world, especially amongst teenagers, that represents a crucial and medical burden for society (Beresford et al., 2014; Gutierrez and Sher, 2015; Marazziti et al., 2015; Derges et al., 2017). The association between depressive syndromes (DSs) and alcohol abuse is also well established, as it is the notion that a progressive involvement with alcohol may increase the risk for depression (Davis et al., 2008; Boden and Ferguson, 2011).

Depressive syndromes (DSs) are a heterogeneous group of conditions of different severity, duration and prognosis, representing one of the most common types of psychiatric disorders amongst people suffering from alcohol dependence (AD) (Saykov and Sosin, 2004; Satre et al., 2011; Pilling et al., 2011; Napryeyenko et al., 2011; 2013a; 2013b). AD-associated DSs often induces actualization of morbid attraction to alcohol and poses a relapse risk that, to a considerable extent,

may induces poor quality and duration of remissions (Haller et al., 2014).

Clinical surveillance studies of AD patients showed that those also suffering from DSs are difficult to manage in terms of diagnosis, treatment, preventive healthcare, as well as medical and social rehabilitation (Grothues et al., 2008; Iovieno et al., 2011; Berking et al., 2011).

Diagnosis of DSs in AD turns out to be problematic because of the dominance of unclear clinical pictures that are connected to different casual factors triggering the onset of DSs. Depressive symptoms, although representing a main attribute of AD, are frequently ignored by the patients themselves, and cannot be easily detected by the surrounding people. Again, their existence can be "hidden" behind systematic excessive alcohol consumption, or several somatic and cerebral-organic sequelae. Such patients neither seek medical help at all, or the reason for their consulting a doctor is the consecutive alcohol consumption relapses. Further, a tendency towards lingering course

and therapeutic resistance of DSs can be observed. In addition, it should be noted that depression and AD are the most widespread psychopathological causes of suicide. Indeed, both acute or chronic alcohol intake and depression are associated with suicidal behavior. Several suicide cases are heavy drinkers; a positive correlation has been described between per capita alcohol intake and the suicide rate (Matsushita and Higuchi, 2009; Pringuey et al., 2014; Tolliver and Anton, 2015; Norström and Rossow, 2016; Xuan et al., 2016). Besides AD, another main factor of negative prognosis of DSs is also represented by the inadequate personal adaptation (ICD-10: F43.20; F43.21), and the emotional-behavior disorders (F43.25) (Napryeyenko et al., 2013a; 2013b). That is why the problem of DSs associated with AD is of great importance especially in combat veterans, as they seem particularly vulnerable to this morbid condition (Wells et al., 2010; Crum-Cianflone et al., 2016; Semigina et al., 2017).

For the above-mentioned reasons, the presence of depressive symptoms in the clinical picture of AD requires lengthy medical-rehabilitation help and psycho-prophylactic measures in clinical setting, as well as subsequent outpatient treatment taking into consideration the specific weight of biological, psychological, social factors at the basis of DSs origin, as well as their clinical properties and dynamics.

The aim of the study was to explore DSs associated with AD in patients admitted to intensive care psychiatric units, by means of a wide battery of questionnaires/rating scales.

Methods

Subjects

One hundred sixty inpatients (all men) between 25 and 58 years of age (mean \pm SD: 37.30 \pm 7.97), suffering from AD and DSs and recruited from a clinical samples of the Department of Psychiatry and Narcology of Bogomolets National Medical University, and the Territorial-Medical Union "Psychiatry", Kyiv, Ukraine, were included.

The educational level of the patients was as follows: primary school (21, 13.1%), secondary school (95, 59.4%), and university or post-hoc education (44, 27.5%).

As far as the occupational status is concerned, 78 (48.8%) patients had a temporary job or did not work at all, 39 (24.4%) were seasonal workers, and 43 (26.8%) ones had a low-skilled jobs.

Seventy-five patients (46.8%) were married of whom 38 (24.0%) of the second time, 54 were divorced (33.8%), and 31 (19.4%) were single.

Clinical diagnosis was carried out by means of International Classification of Diseases, 10th edition (WHO, 2010).

Psychopathological assessments

The following diagnostic/rating scales for assessment of both diagnosis and the severity of symptoms were used:

- *The Alcohol Use Disorders Identification Test (AUDIT)*. It is questionnaire for screening for excessive drinking and alcohol use disorders, according to multinational World Health Organization collaborative study (Bohn et al., 1995);

- *The Hamilton Rating Scale for Depression (HRSD or HAM-D)*. It is a multiple item questionnaire used to assess severity of depression. It provides an indication of depression and an evaluation of recovery. HAM-D is designed for adults and is used to rate the severity of their depression by probing mood, feelings of guilt, suicide ideation, insomnia, agitation or retardation, anxiety, weight loss, and somatic symptoms (Hamilton, 1960; Hamilton and Hamilton, 1980);
- *The State-Trait Anxiety Inventory (STAI)*. It is a psychological inventory based on a 4-point Likert scale and consists of 40 questions on a self-report basis. The STAI measures two types of anxiety, state anxiety, or anxiety about an event, and trait anxiety, or anxiety level as a personal characteristic. Higher scores are positively correlated with higher levels of anxiety (Spielberger et al., 1983). STAI was adapted in Russian 1985 by Yu I. Khanin (2002);
- *Questionnaire for the determination of accentuated personalities* (Schmieschek–Leonhard Questionnaire). It is a psychology inventory for accentuated personality traits diagnostic according to the first typology of character accentuations appeared in psychology, which was proposed in 1968 by Karl Leonhard (Germany). Based on the concept of K. Leonhard, a character questionnaire was developed (Schmieschek, 1970). This questionnaire determines the dominant type of accentuation in a person: hyperthymic, anxious-fearful, dysthymic, pedantic, excitable, emotive, stuck, demonstrative, cyclothymic and affective-exalted.

Clinical, laboratory and instrumental (electroencephalography, EEG; magneto-resonance imaging, MRI, etc.) tests were also used when indicated.

Statistical analyses

Excel spreadsheets (MS Windows) were used as the database structure for the data accumulation, storage and analysis. Statistical analysis was performed in the analytics software package Statistica 10.0 (StatSoft) using parametric and non-parametric criteria. Statistical processing included descriptive statistic, ANOVA, Student's t-test, paired t-test, chi-square test (criterion χ^2), and exact Fisher test.

Results

Alcohol dependence comorbid with DSs were diagnosed according to the criteria of the ICD-10, and AD was confirmed by the AUDIT in all 160 patients.

The main complaints of the examined patients were as follows: depressed mood and constant emotional tension (temporarily reduced by alcohol use) in all cases, excessive irritability in 139 (86.9%), decreased ability to work and rapid mental and physical fatigue in 121 (75.6%), sleep disturbances in 112 (70.0%), permanent feelings of guilt and self-conviction in 97 (60.6%), pain in internal organs and systems (which, when objectively screened, had no or a doubtful physical basis) in 48 (30.0%), low self-esteem in 44 (19.6%), and headaches more often exacerbated by conflict situations and related to chronic fatigue in 42 (18.7%) patients. In 31 (64.6%), out of these 48 patients the physical complaints represented "masked" depressive and/or anxious symptoms, as detected by the HRSD/HAM-D

or the Spielberger–Hanin scales (tables 1 and 2).

At the time of the survey the following DSs subtypes were observed: hypochondriac (68, 42.5%), asthenic (33, 20.6%), agitated (31, 19.3%), dysphoric (14, 8.8%), simple (7, 4.4%) and apathetic (7, 4.4%).

The heterogeneous clinical pictures were the result of:

1. *Exacerbation of endogenous DSs* (within the framework of bipolar disorder – ICD-10: F31.3; depressive episode – F32; recurrent depressive disorder – F33.0 and F33.1), worsened by AD in 18 (11.3%) patients. The clinical pictures of DSs were simple and anxious-depressive in 7 (4.4%) and 5 (3.1%) patients, respectively, while 6 (3.8%) patients showed complex syndromes, such as depressive obsessions and depersonalization.
2. *DSs provoked by organic abnormalities related to alcohol intoxication* (F06.32) in 36 (22.4%) patients. The main DSs types observed in this subgroup were: astheno-adydynamic (15, 9.3%),

dysphoric (14, 8.8%) and apathetic (7, 4.3%) patients.

3. *Mixed DSs* (depressive – F38), was present in 106 (66.3%) cases. The depressive-hypochondriac symptoms were recorded in 68 (42.5%), the anxiety-depressive in 20 (12.5%), and the asthenia-depressive ones in 18 (11.3%) cases.

According to the results of clinical and laboratory examinations, alcoholic liver diseases were diagnosed in 72 (45%), alcoholic cardiomyopathy in 59 (36.9%), and a chronic pancreatitis in 19 (11.9%) patients (Table 3).

“Secondary”, namely organic, origin of DSs was confirmed by neurologic examination, magnetic resonance imaging (MRI), computed tomography (CT), and electroencephalography (EEG). In terms of symptoms severity, those depressions were the least severe with short-term psychopathy-like reactions together with significant exhaustion of psychological

Table 1. Average scores of depressive symptoms as assessed by the Hamilton Rating Scale for Depression (HRSD)

Symptoms	n = 160
Depressive mood	2.36
Feeling guilty	2.11
Suicidal intentions	0.87
Early insomnia	1.81
Middle insomnia	1.70
Late insomnia	0.12
Working capacity and activity	2.85
Delay	2.00
Agitation	0.83
Mental anxiety	1.16
Somatic anxiety	2.66
Gastrointestinal symptoms	0.54
General somatic symptoms	0.48
Genital symptoms	0.11
Hypochondria	2.11
Weight loss A	1.45
Weight loss B	0.12
Criticism (insight)	0.20
Daily oscillations A	1.31
Daily oscillations B	0.13
Depersonalization and derealization	0.14
Paranoid symptoms	0.09
Obsessive and compulsive symptoms	1.23
Total average score	26.38

Table 2. Distribution of anxiety levels by STAI (Spielberger–Hanin scale) (% ± SD)

Level	n=160
Reactive (state) anxiety	
Low	14.9±6.8
Moderate	71.5±8.2
Severe	11.3±6.3
Personal (trait) anxiety	
Low	3.7±0.6
Moderate	59.4±8.2
Severe	30.0±7.1

Table 3. Clinical diagnoses of patients with DSs and AD according to ICD-10 (n=160)

Diagnosis		N	%
Bipolar affective disorder (F31.3) depressive episode (F32) recurrent depressive disorder (F33.0 and F33.1)		18	11.3
Depressive disorder of organic genesis due to alcohol intoxication (F06.32)		36	22.4
Other mood disorders (depressive –F38) so-called mixed (heterogeneous)		106	66.3
The degree of expressiveness depressive manifestations	Mild	63	39.4
	moderate	90	54.1
	severe	11	6.9
Somatic pathology			
Alcoholic liver disease (K70)		72	45.0
Alcoholic cardiomyopathy (I42.6)		59	36.9
Chronic pancreatitis of alcoholic etiology (K86.0)		19	11.9

Note: Patients may have more than one diagnosis

activity and moderate cognitive impairments. Frequent mood shifts were present triggered by trivial stimuli or spontaneously, characterized by, irritability, impatience and impulsivity.

In 78 patients (48.8%) there were frequent episodes of depression of increased intensity on the background of slow DSs course induced by psychological traumatic events, and/or deterioration in somatic state that occurred together with actualization of morbid attraction to alcohol. DSs amongst these patients appeared to be treatment-resistant.

Analysis of constitutional-typological peculiarities of the personality of patients by the Questionnaire for the determination of accentuated personalities (Schmieschek–Leonhard Questionnaire) showed that expressed demonstrative accentuation was observed in 39 (24.4%), excitable in 38 (23.6%), cyclothymic in 37 (23.1%), emotive in 14 (8.8%), anxious-fearful in 14 (8.8%), stuck in 12 (7.5%), and dysthymic in 6 (3.8%) patients. At the same time, there were no patients with pedantic, affective-exalted and hyperthymic accentuation (Table 4). The average value of the index of expressive accentuation was 18.4±6.2 points.

Discussion

The present study aimed an exploring the peculiarities of DSs associated with AD in patients admitted in mental hospital. Our findings indicate that DSs should be considered one of the “core” components

of the complex clinical pictures typical of AD.

In a number of cases (18, 11.3%), DSs represented a worsening of an already pre-existing depressive disorder. This is consistent with the findings of previous studies, where the observed rate of DSs was 10-15% (Napryeyenko et al., 2011; 2013a; 2013b). Their typical features were: daily mood changes with improvement in the second half of the day, inadequacy and guilt feelings, somatic vegetative disorders attributable to “classic” depressive symptoms (tachycardia, hyperhidrosis, hyperemia, tremor, midriasis, constipation, etc.). In addition, seasonality (spring-autumn exacerbations) was observed, with periods of lingering states with decreased activity and performance, loss of previous interests, constant presence of psychic tension, eating disorder, loss of weight, insomnia.

The AD-associated DSs observed were mainly organic (22.4%) and mixed DSs (66.3%) with signs of organic brain damage. Organic depressive disorders were documented following a comprehensive examination of a psychiatrist and neurologist, using MRI, CT, and EEG. These data are in accordance with our previous studies (Napryeyenko, 2013; Napryeyenko et al., 2011; 2013b), and the recent literature data on depression as a risk factor of organic physical diseases and illnesses (Bica et al., 2017), comorbidity of organic brain damage and AD-associated mood disorders (Azorin et al., 2017) and co-occurring psychiatric disorders and alcoholism (Stephen and Martin, 2014).

The DSs observed can be considered a structural component of the main syndromes of AD. Their

Table 4. Distribution of types of expressive personal accentuation in patients with DSs and AD according to the Schmieschek–Leonhard Questionnaire

Type of accentuation	Number	%
Demonstrative	39	24.4
Excitable	38	23.6
Cyclothymic	37	23.1
Emotive	14	8.8
Anxious-fearful	14	8.8
Stuck	12	7.5
Dysthymic	6	3.8

Note: Patients may have more than one type of expressive accentuation

occurrence is associated with organic brain damage that resulted from direct toxic effects of ethanol on the CNS and/or also from other dysmetabolic mechanisms due to the somatic pathology caused by chronic alcohol intoxication. Alcohol-mediated organic damage is well known all along and supported by new data (Obad et al., 2018). The clinical picture of such depression largely corresponded to variants of the psycho-organic (encephalopathic) syndrome.

A common feature of such organic/mixed depressive disorders was excessive emotional lability, irritability, and propensity to affective outbreaks. The reasons for the onset, progressive clinical course and recurrence of AD should also be attributed to a number of provocative micro-social situations described above: they become psycho-traumatic in the face of exhausted mental activity, which is possibly due to psycho-organic changes. Our results correspond to descriptions of organic depressions in other pathological conditions (Adinolfi et al., 2015; Chen et al., 2016; Petrak et al., 2015; Robinson et al., 2016; Ahmed et al., 2017; Havavuk et al., 2017; Mayer et al., 2017).

In the majority of our patients depressive symptoms were frequently “hidden” behind asthenic, hypochondriac and somatic autonomic disorders. A common feature of all AD-associated DSs types was patients’ low or absent perception of their own depressive state, low intensity of guilt with strive for blaming the others for their own problems, presence of intense short-term or lingering psychopathy-like reactions, mismatch between high severity of hypochondriac and asthenic evidence and moderate severity of the existing somatic and cerebral organic disorders. Moreover, autonomic changes are often found in altered mood states and appear to be a central biological substrate linking depression to a number of physical dysfunctions (Sgoifo et al., 2015) within the frame of the challenging hypothesis depression as systemic illness (Catena-Dell’Osso et al., 2011; Iwata et al., 2012; Marazziti et al., 2014; Miller and raison, 2016; Wittenborn et al., 2016).

Socio-psychological factors play a significant role in the origin of AD-associated DSs. On the one hand, such patients are aware that they need radical changes in lifestyle, stereotypes, and behaviours. On the other hand, they seem unable to appropriately control their own emotions, react to ordinary stressful situations of everyday life without alcohol consumption. As a result, their maladjustment accelerates, the risk for auto-aggressive behaviour increases, the efficiency of treatment and rehabilitation measures decreases. A vicious circle gets started: excessive alcohol consumption induces affective pathology, which in turn enhances alcohol consumption. Psychosocial stress cannot be considered only a result of chronic alcohol abuse, but also a cause of high alcohol consumption acting as a distress syndrome maintaining the subsequent course of the alcohol use disorder. Indeed, psychosocial stress, distress and psychological effects can be understood as an important psychopathological developmental process of prolonged alcoholism (Walter et al., 2005).

When analyzing the symptoms of our patients, it emerged that the interpretation of the feeling of own guilt, undervalued self-esteem, lack of self-realization and other psychological and social problems dominated the desire to blame the surrounding people and external life circumstances. This indicates a maladaptive way of their psychological defense mechanisms, and an attempt to justify the continuation of alcohol abuse and the responsibility for the possible or current negative

effects of alcohol abuse on others. These peculiarities should be taken into account during psychological sessions and psychotherapy. Whatever the causes, comorbidity of DSs with AD may complicate treatment and resolution of both disorders, often presenting as a vicious circle that is difficult to break (Littlejohn, 2005).

The most frequent personality peculiarities of DSs and AD were demonstrative, excitable, and cyclothymic accentuations, as already reported in the current literature (Pashkovskij et al., 2018, Dervaux and Laqueille, 2018).

Our paper suffers from a limitation that should be acknowledged: indeed, the sample was constituted by men only, although all within a limited age range. Therefore, it would be interesting to replicate the same study in women and in subjects of other ages.

In conclusion, our findings indicate that DSs are not rare or casual consequences of AD, but rather represent a constant association that complicates and worsens the clinical picture and individual’s adjustment. It is thus essential that the treatment of these conditions should be a multifaceted integration of medical, psychiatric and psychological interventions.

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