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Psychological factors of propensity for alcoholism (social anxiety, hostility, Machiavellianism) in depressive patients

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Based on the analysis of psychosocial models of alcoholism and depression the general and specific factors of occurrence and course of illness are identified in the present study. The authors put forward hypotheses regarding the mechanisms of activation of psychological addiction to alcohol as an ineffective coping strategy. The necessity of empirical research needed to refine the techniques and targets of patient care within the psychiatric and psychological care is justified. The results of the pilot study show that depressed patients who are subject to alcohol dependence feature marked distress in interpersonal relations, coupled with hostility and aim at gaining profit and pleasure by manipulating other people. These patients are hostile to others, while in interpersonal relationships personal safety is important to them, so they may be more likely to resort to manipulation. In their attitudes with respect to health the communication of these patients is characterized by hedonistic tendencies and histrionic traits in interpersonal contacts.

Keywords: depression, alcoholism, hostility, Machiavellianism, social anxiety

One of the most common complications of depression is the abuse of alcohol and the risk of alcohol dependence. Studies show the high comorbidity of alcoholism and depression (Krylov, 2004; Yanushkevich, 2005), and — at the non-clinical level — they show a high correlation of symptoms of emotional distress and alcohol consumption as a dysfunctional way of coping (Vasserman, Ababkov, Trifonova, 2010). These connections were established for various age and population groups: adolescents (Windle, Davies, 1999), students (Dennhardt, Murhy, 2011; Patock-Pecham, Morgan-Lopez, 2007), working adults (Parker et al, 1987).

In most cases the combination of symptoms of affective disorders and alcohol abuse are promptly recognized, and the two issues become the focus and target

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of therapeutic work. However, the experience of specialists of the Laboratory of Clinical Psychology and Psychotherapy of the Moscow Research Institute of Psychiatry (doctors, psychologists, psychotherapists) shows that a large proportion of patients seeking psychological or psychiatric help do not always report the problem of alcohol abuse openly and in a timely manner. The reasons for this may be different, ranging from underestimating the severity and consequences of alcohol abuse compared with the severity of depressive symptoms (mostly in men) to self-stigma and perception of alcoholism as a "shameful" symptom (mostly in women). This has a negative effect on the quality of the therapeutic alliance (concealing part of the problem) and on the effectiveness of medical and psychological care. These observations have led to the formulation of the task to conduct a complex clinical psychological study of factors of the tendency to abuse alcohol during depression.

Phenomenology of depression a part of alcohol dependence has been comprehensively studied in Russian psychiatry. Depression is regarded as an etiological factor, as part of the structure of withdrawal symptoms, craving for alcohol, or as appearing at the stage of remission (Gurevich, 2005; Kinkulkina, 2009; Nikiforov, 2007 ; Rybakova, Yeryshev, 2008). It has been shown that the depth of depressive symptoms in patients with alcohol dependence does not reach deployed depressive syndromes and they are characterized as unstable, polymorphic, partial (Yanushkevich, 2005).

Clinical features of alcohol dependence as a secondary phenomenon in relation to endogenous mood disorders have also been extensively studied in psychiatry (Gofman, Oyfe, 1997; Rybakova, Yeryshev, 2008). The researchers note that alcoholism is usually accompanied by a mild depression and when the affective disorder strengthens the drinking often stops. Authors describe a connection between the dominant affect (depression or anxiety) and an increase or a decrease in tolerance to alcohol, respectively, as well as the connection of alcohol dependence dynamics over the course of an affective disorder.

The mechanism of the relationship between depression and the desire for psychoactive substances, including alcohol, is described in different ways: it is seen as two separate disorders with different pathogenetic mechanisms; or as a single complex of symptoms (Rybakova, Yeryshev, 2008; Pogosov, 2009; Lapin, 2004; Hamdan-Mansour, Halabi, Dawani, 2009; Peirce, Frone, 2000).

The clinical studies described above were conducted on a specific sample of subjects: patients with a diagnosed affective disorder and alcohol dependence. At the same time, as noted above, outpatient psychiatric and psychological care facilities for patients with affective spectrum disorders regularly encounter patients who, for various reasons, do not look for help from psychiatrists and do not report the fact of regular alcohol abuse (anosognosia, self-stigmatization). There is also a special group of patients for whom the use of alcohol does not reach the level of a disorder, but has the characteristics of a strategy to cope with stress and life's difficulties (and, of course, makes a negative contribution to depression). If such a dysfunctional strategy is not detected in a timely manner, its negative impact is felt in the reduction of treatment quality for affective disorders and in the reduction of the accuracy of prognostic estimates.

The authors were not able to find clinical and psychological studies of the inclination to abuse alcohol as an ineffective coping strategy in patients with affective

spectrum disorders as opposed to alcohol abuse as such in Russian literature. At the same time, when research is conducted in this area in other countries various types of alcohol use are identified and studied: — "problem drinking behavior", "problematic drinking" (Grothues et al., 2005; Bonin, McCreary, Sadava, 2000); "alcohol-related problems" (Yamada et al., 2008).

We have reviewed the literature in order to highlight the psychological factors that can affect the activation of the propensity for alcohol abuse during depression. In our opinion the timely detection of alcohol addiction and the factors of this tendency can improve the treatment of depression. The identified psychological factors may become the basis for the development of targets of psychotherapeutic work. Based on the fact that the combination of alcohol abuse and depression complicates drug therapy (Lapin, 2004) identifying and accounting for alcohol addiction can help avoid the deepening of depression and the development of dependence.

To identify the hypotheses of an empirical study of psychological factors of the tendency to abuse alcohol in patients with depressive disorders the authors conducted an analysis of theoretical multivariate psychosocial models of the relationship between alcohol dependence (Sirota, Yaltonskiy, 2008 and depression (Kholmogorova, Garanian, 1998), as well as a review of empirical studies of psychological factors of depression associated with the risk of alcohol abuse.

A number of general factors that influence the occurrence of alcohol and depression can be noted (a model of a comprehensive complex of symptoms).

Non-specific, general biological factors for the occurrence of depression and alcoholism are genetic predisposition (mental illness and substance abuse in relatives), severe physical illness and injuries. There is also data from studies of the neurophysiological mechanisms of depression and alcohol abuse, according to which the common pathogenetic factor for these disorders is the "failure of the catecholamine and serotonin system" (Lapin, 2004).

Many researchers point out the leading role of stress (both everyday and acute traumatic events) and ineffective coping strategies in the occurrence of alcoholism and mood disorders (Vasserman, Ababkov, Trifonova, 2010; Lapin, 2004; Pogosov, 2009; Sirota, Yaltonskiy, 2008; Kholmogorova, Garanian, 1998).

Among the common psychological factors of alcoholism and depression, attention is immediately drawn to the similarity of personal characteristics such as alexithymia (Kristal, 2000), social anxiety (Ham, Hope, 2003), as well as marked disturbances in interpersonal relations, such as the narrowing of the social network and the reduction of social support (Kholmogorova, Garanian, Petrova, 2003; Brugha, 1995). Greater risk of alcohol abuse is seen in those who have a deficit of social support. However, these disruptions are not identical in alcoholdependence and depression. In dependence there is a convergence of the members of the reference group and social support is very strongly formed within it, while the connections with family, professional society, sober friends is gradually interrupted (Sirota, Yaltonskiy, 2008).

The quality of relationships and relationship satisfaction are significantly affected by strain in social contacts, for example, social anxiety that often accompanies depressive disorders. The study by L.S. Ham and D.A. Hope (2003) shows a pronounced relationship of social anxiety and alcohol abuse: according to this data

social phobia is combined with alcohol abuse even more often than with depression. A stronger connection between social anxiety and alcohol dependence as compared to general anxiety and specific phobias has been revealed (Ham, Hope, 2003).

The following factors can be noted among the somewhat more specific factors of depression onset:

- Personality traits (perfectionism, hostility (Vaksman, 2005; Garanian, 2010)) and a reduced quality of social support (without compensation, as in addictive patients). Studies of the relationship between the severity of depression, hostility, and substance abuse (Hamdan-Mansour, Halabi, Dawani, 2009) suggest that the relationship of substance abuse with hostility may be mediated by the level of symptoms of affective disorders.

The following factors can be noted among the somewhat specific factors of the formation of alcohol dependence:

- Cultural factors (expectations and understanding of the influence of alcohol intoxication), the actual properties of alcohol, certain personality traits (conformist, risk tolerance, protest behavior, antisocial, self-aborted), reduction of social support with a focus on addictive group.
- Inefficiency of social support processes in patients with alcohol and drug abuse is associated with qualitative changes in social networks, since they are primarily communities that abuse alcohol and are often antisocial. Support from the rest of the environment is not perceived in the same positive way. In addition, systematic abuse of alcohol that is supported by peers makes addictive and depressive symptoms stronger (Sirota, Yaltonskiy, 2008).

Of particular interest is the phenomenon of the Machiavellian personality. Recent studies reveal its significant association with alcoholism (Zentsova, 2009). Machiavellianism can be defined as the tendency of a person to use manipulative behavior, often implemented while hiding their true motives. It is assumed that this is a quantitative characteristic inherent in varying degrees to all people. The connections to depression found by foreign researchers are not straightforward, but a definite relationship can be seen (Latorre, McLeoad, 1978).

According to research, Machiavellianism personality correlates positively with suspicion, hostility, and externality. It includes a belief that others can not be trusted and that they can be manipulated. It also includes specific skills of manipulation. During communication these people are guided more by themselves and by solving their problems, and not by the other person. But they have a more realistic view of the world and, as studies show, can better understand themselves and others, as well as be persuasive and communicative in interaction (Znakov, 2001).

The phenomenon of Machiavellianism on the cognitive level includes the belief that most people do not have strong will, are not altruistic and are dependent, and that manipulation "could and should be used." Behaviorally this is manifested in the fact that when communicating with others, people with high scores on the scale of Machiavellianism follow their interests more, and are distanced in evaluating the interlocutor, focusing more on the task rather than on the interlocutor as a person (Znakov, 2001). This component of Machiavellianism can be roughly defined as "asocial."

The behavioral component of Machiavellianism also includes specific skills of manipulation, such as the ability to persuade others, flattery, deception or intimidation (Znakov, 2001). Motivational scope and values of people with high levels of Machiavellianism are characterized by the absence of such values as responsibility for his/her actions, a rejection of the values of forgiveness, love, and social utility. During communication Machiavellianism is expressed in focusing on own welfare of the subject. The interpersonal aspect of human life of a person who shows high levels of Machiavellianism is usually rich with more frequent shallow contacts with friends than that of a person with a low score on this scale (Znakov, 2001). These features allow to distinguish a component of Machiavellianism that corresponds to hystrionic features.

Of interest are studies of R. Lattore and E. McLeoad (1978), devoted to the connection of Machiavellianism and depression. Scientists have discovered the relationship of depressive symptoms and Machiavellianism based on gender. In a healthy sample Machiavellianism is more characteristic of men than women. However, with the emergence of depressive symptoms the picture becomes more complicated: if the indicators of Machiavellianism in men decrease, the women show opposite results — their Machiavellian figures are much higher than before depression onset (Latorre, McLeoad, 1978). It follows that rising rates of Machiavellianism in depressed women may be a risk factor or a consequence of alcohol abuse.

This analysis of the Machiavellian personality traits and the study described above suggests that in the case of association with alcohol abuse, an "asocial" component of Machiavellianism comes to the foreground, and in the case of combination with depression — the "hystrionic" part of it.

Thus, a review of numerous empirical studies of these factors provides grounds to assume the existence of several psychological mechanisms that lead to alcohol abuse in depressive disorders:

1. The mechanism of interpersonal risk of alcohol dependence allegedly linked to a combination of depression with symptoms of social anxiety. In this case, alcohol can act as a facilitator for patient communication, through which they can make up for lack of social support.
2. Alcohol abuse can be the result of the combination of hostile traits (phenomenologically manifested as lack of social and positive attitudes, negative judgments about the events) and Machiavellianism (hedonism and easy deliverance from suffering at any cost, represented more by the «hystrionic» component) within the structure of the patients' personality.

In order to verify these predictions we conducted an empirical study of psychological factors of the tendency for alcohol abuse in patients with depression.

Research methods

Using the AUDIT (Alcohol Use Disorders Identification Test (Saunders, Aasland)), the studied sample was separated into groups of patients subject to (group 1, n = 13) and not subject to (group 2, n = 19) alcohol abuse. This survey is a screening test for the detection of alcohol dependence. It includes 10 questions designed to identify the physiological and psychological phenomena and disorders associated with the

formation of dependence (increased tolerance, craving for alcohol, changes in interaction with others, work efficiency). The questionnaire was translated into Russian and was used on a Russian-speaking sample.

The methodological complex also included A. Bek's anxiety and depression questionnaires (Beck Anxiety Inventory, Beck Depression Inventory, adapted by N.V. Tarabrina (2001)), the scale of social avoidance and distress (SADS, Watson, Friend, 1969), adapted by V.V. Krasnova and A.B. Kholmogorova, the "Mak-IV» questionnaire, adapted by V.V. Znakov (2001), and the projective hostility test (A.B.Holmogorova, N.G.Garanyan, 1998). A semi-structured interview was designed to assess the life of the subjects, attitudes towards health and alcohol dependence.

Sample description

On the basis of the departments of the Moscow Research Institute of Psychiatry, 32 patients (6 men and 26 women aged 25 to 55 years) with a diagnosis of F 33.1 (recurrent depressive disorder, current episode moderate, ICD-10) were examined. A scientific advisor, professor, Doctor of Medical Science T.V. Dovzhenko guided the clinical analysis of the sample of patients. Using the AUDIT questionnaire (Alcohol Use Disorders Identification Test (Saunders J.B., Aasland O.G.)) the sample was separated into two groups: patients subject to alcohol abuse (n=13) and patients not subjects to alcohol abuse (n=19).

A group of healthy control subjects was formed (those not experiencing symptoms of depression), corresponding in socio-demographic characteristics to the experimental group.

Results

The comparison of groups using the Student criteria (after the verification of the equality of dispersion using the Levene criteria) shows that patients subject to alcohol abuse are characterized by higher scores of social anxiety (tendency to avoid social contact and discomfort in social situations), in comparison to patients who are not inclined to abuse alcohol. In a sample of healthy subjects (those with no depressive symptoms) an inverse relationship can be seen: the subgroup that is subject to alcohol dependence has lower indicators of social anxiety, except for the indicator of social avoidance (Table 1, 2).

Table 1. Severity of depression, social distress and social avoidance in the group of patients with depression

Groups / Scales	Depressive patients		P-criteria
	Subject to alcohol abuse (n=13) M(Sd)	Not subject to alcohol abuse (n=19) M(Sd)	
Social distress	7,5(4,5)	5,6(3,7)	p=0,05
Social avoidance	6,3(3,3)	4,9(3,2)	p=0,07(t)
Social anxiety	13,8(7,1)	10,5(6,1)	p=0,03

M — mean, Sd — standard deviation

Table 2. Severity of depression, social distress and social avoidance in the group of subjects without depression

Groups / Scales	Subjects with no depression		P-criteria
	Subject to alcohol abuse (n=7) M(Sd)	Not subject to alcohol abuse (n=10) M(Sd)	
Social distress	1,5(1,5)	4,1(4,3)	0,009
Social avoidance	4(2,3)	3,5(2,1)	0,08 (t)
Social anxiety	5,5(2,8)	7,6(6)	0,05

M — mean, Sd — standard deviation

An attempt was made to trace the nature of these differences in the combination of traits of hostility and Machiavellianism in the experimental and control groups. We hypothesized that patients with depression will feature a combination of dysfunctional patterns of hostility and the "histrionic" component of Machiavellianism. This pattern, in turn, causes tension in interpersonal relationships (social anxiety).

Analysis of means, indeed, indicates a greater expression of hostility in subjects who have an inclination for alcohol abuse than those who are not subject to abuse in both study groups (Figure 1). The differences relate to all the three dimensions of negative attitudes towards people: 1) the vision of others as "subject to rising above others by belittling them" (as dominant and jealous), 2) the vision of others as "despising 'weakness'" 3) viewing others as "cold and indifferent".

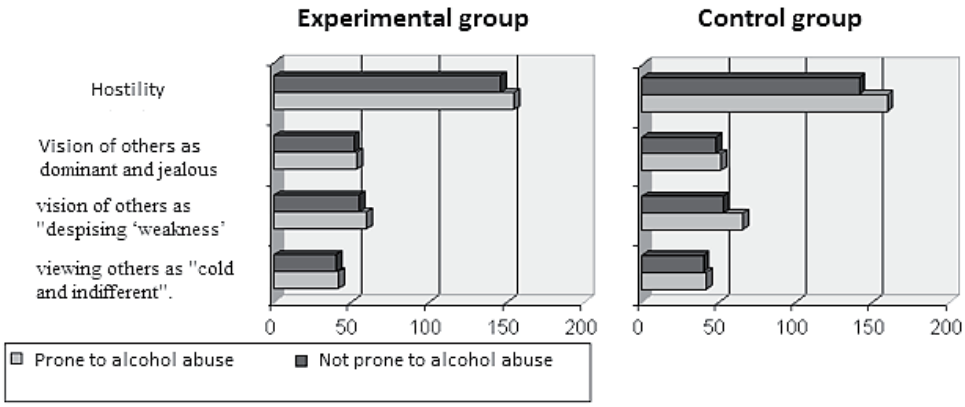

Figure 1. Indicators of hostility in subjects subject to and not subject to alcohol abuse in the experimental and control groups

Severity index of the Machiavellian personality in the group of patients with depression was significantly higher in subjects who are prone to alcoholism ($p < 0.05$) (Table 3). In the control group this pattern has not been found, as well as no difference was found in the expression of Machiavellianism between healthy subjects without depressive symptoms from patients with depression.

Table 3. Index of Machiavellian personality in the groups

Groups / Scale	Depressive patients		Healthy subjects	
	Subject to alcohol abuse (n=13) M(Sd)	**Not subject to alcohol abuse (n=19) M(Sd)**	**Subject to alcohol abuse (n=7) M(Sd)**	**Not subject to alcohol abuse (n=10) M(Sd)**
Machiavellian personality	**78,7(11,5)***	**69,1 (8,3)***	68,7(12)	68,4(12)

M (mean) — среднее, Sd (Standard deviation)

* — $p<0.05$ groups of depressive patients, subject to alcohol abuse and not subject to alcohol abuse (Student criteria (after the verification of the equality of dispersion using the Levene criteria)

A qualitative analysis of interviews was conducted using expert evaluations. The analysis included the identification and categorization of repeating themes as well as the characteristics of answer structures (for example, referring to specific life situations or to general perceptions). The panel of experts consisted of S.V. Volikova (Candidate of psychology, senior research assistant of the laboratory of clinical psychology and psychotherapy of FBGU "MRI of Psychiatry" and A.A. Dolnykova (member of the laboratory of clinical psychology and psychotherapy of FBGU "MRI of Psychiatry".

The qualitative analysis of interviews with respondents identified a number of distinctive features in the responses of the subjects:

1. When trying to describe the relationship between lifestyle and depression respondents who are subject to alcohol abuse often pay attention to their status and mood. Those not subject to alcohol abuse often mentioned the role of stress in causing depressive feelings.
2. When answering a question related to specifying the relationship of depression and lifestyle patients subject to alcohol abuse increasingly turned to specific situations of personal experiences, examples from their own lives. Respondents not subject to alcoholism answered more generally, linking emotional well-being to self-realization.
3. Respondents inclined to abuse alcohol highlighted sports aimed at having fun among daily physical activities. Those not subject to alcohol abuse noted everyday activities more often: housework, travel on public transport, etc.

Discussion

As noted in the introduction, alcohol abuse is a common complication of depression, which has a negative impact on both the quality of the therapeutic alliance and the effectiveness of medical and psychological care.

A review of the literature suggests several mechanisms of activation of inclination to abuse alcoholism, all related to interpersonal dysfunction and a special combination of attitudes towards communication — social anxiety, hostility, Machiavellianism, histrionic personality traits.

- The interpersonal mechanism of the risk of alcohol abuse is presumably linked to the combination of depression with symptoms of social anxiety.

In this case, alcohol can act as a facilitator for patient communication, through which they can make up for lack of social support.

- Alcoholism can be caused by a combination of traits of hostility (phenomenologically manifested as lack of socially positive attitudes, negative judgments about ongoing events) and Machiavellianism (hedonistic outlook on life and easy deliverance from suffering at any cost) in the structure of the patients' personalities.

The current empirical study demonstrates that mechanisms of psychological tolerance to and independence from alcohol are similar among patients with symptoms of depression and subjects with no depressive symptoms. Subjects that were not inclined to abuse alcohol were distinguished by the lowest expression of social distress and dysfunctional perceptions about communication. At the same time, depressed patients who are not subject to alcohol abuse experience some level of distress in interpersonal communication combined with hostility. However, they do not demonstrate an aim to obtain personal gain and pleasure through manipulating other people.

Subjects who were inclined to abuse alcohol (regardless of depressive symptoms) are distinguished by higher social distress in combination with a comparatively higher level of Machiavellianism and an aim to manipulate others for personal gain or pleasure. These patients are hostile to others, while in interpersonal relationships personal safety is important to them, so they are more likely to resort to manipulation. In their attitudes with respect to health and communication these patients are characterized by hedonistic tendencies and histrionic traits in interpersonal contacts.

The results of this study aid in specifying the future vectors of research on factors that activate the propensity for alcohol abuse in depression. However, this study was cross-sectional by design and thus has several limitations. At the present moment it is too early to talk about the demonstration of cause and effect connections between an inclination toward alcohol abuse on the one hand and the studied interpersonal factors on the other hand.

Another limitation is the inability to reduce the entire spectrum of stressful situations that a patient experiences to the interpersonal context only. On one hand, the dysfunction of the interpersonal sphere, such as the contraction of the social network, decline in quality of social support, etc. are among the most important factors of depressive disorders. Alcohol can act as a universal facilitator of communication, lower the feeling of social insecurity and fulfill the deficit in interpersonal competencies (Zavyalov, 1988, Sirota, Yaltonskiy, 2008). On the other hand, according to clinical research one of the main motives for alcohol usage during depression is a somewhat conscious desire to alleviate the subjectively uncomfortable state. Thus, alcohol can be used by patients to directly alleviate their condition and may have no connection with situations that involve interpersonal communication (Gofman, Oyfe, 1997).

Conclusions

Proneness to alcohol abuse in patients with depression is connected with marked distress in interpersonal relationships combined with hostility and the aim to obtain personal gain and pleasure through manipulating other people. These patients

are hostile to others, while in interpersonal relationships personal safety is important to them, so they may be more likely to resort to manipulation. In their attitudes with respect to health the communication of these patients is characterized by hedonistic tendencies and histrionic traits in interpersonal contacts.

The presented results do not allow to make conclusions about the cause and effect relationships between studied phenomena (high social anxiety and hostility can both be factors as well as consequences of long-term depression and alcohol abuse). Result elaboration is possible with a prospective research design. The obtained data allows only to specify the hypotheses about the mechanisms of the activation of the propensity for abusing alcohol during depression. It also specifies the targets of diagnostic interventions and psychological help for this category of patients

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