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THE STRUCTURE AND GENESIS OF NON-PSYCHOTIC PSYCHOPATHOLOGY IN PERSONS WHO UNDERGO OPIOID SUBSTITUTION MAINTENANCE THERAPY

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Abstract

Introduction. Substitution Maintenance Therapy (SMT) has now received the status of a conventional treatment for opioid dependence in Ukraine. It has been introduced since 2005, and by 2018 more than 9.000 patients are systematically receiving SMT. The data obtained in previous part of this study by applying the diagnostic tools for neurotic symptoms on the contingent of 100 SMT patients had shown that near 95% contingent are suffering from non-psychotic anxiety, depression, asthenia, conversion, obsessive and phobic symptoms of mixed origin. **Objective.** To characterize the manifestations, establish the intensity and describe the predictors of non-psychotic psychopathology symptoms in SMT patients. **Materials and methods.** The study was conducted in a prospective design in the period 09.2016-03.2019 on the basis of “Regional Clinical Narcological Dispensary” Zaporizhzhya, Ukraine. The contingent of 100 patients (20 women and 80 men) diagnosed with ICD-10: F11.22 with mean age was $41,2 \pm 5,6$ years and the mean period of systematic use of $16,1 \pm 7,4$ years. Study was based on clinical assessment with “Symptom Checklist-90-

Revised” and statistical methods. **Results.** 5 separate groups of psychopathology predictors were systemized. Role and influence on non-psychotic psychopathology was analyzed for each group of predictors. Clinical assessment with “Symptom Checklist-90-Revised” shown that in the contingent of the study are presented all groups of psychopathological symptoms, but its intensity is generally moderate (12 patients with $GSI \leq 0,50$; 52 patients with $GSI=0,51-1,50$; 36 with $GSI \geq 1,51$). The analysis of correlations between psychopathological symptoms allowed revealing 6 symptom non-psychotic syndromes: anxious-obsessive ($r=0,78$; $p \leq 0,05$), obsessively-sensitive ($r = 0,64$; $p \leq 0,05$), depressively-sensitive ($r=0,81$, $p \leq 0,05$), depressive-dysphoric ($r=0,66$; $p \leq 0,05$), paranoically-dysphoric ($r=0,75$; $p \leq 0,05$), anxious-paranoic ($r=0,76$; $p \leq 0,05$). **Conclusions.** Non-psychotic psychopathological violations in persons undergoing SMT program have a complex multifactorial genesis, which leads to a distortion of their clinical manifestations which become specific; predictors of non-psychotic psychopathology in persons undergoing SMT program could be systematized into 5 groups (exogenous, organic, somatogenous, psychogenous, personologic) that makes multidirectional effect on clinical characteristics and intensity of psychopathological symptoms. Non-psychotic psychopathology in persons undergoing SMT program have a specific clinical profile – in the contingent of the study are presented all groups of psychopathological symptoms with moderate intensity. There are 6 non-psychotic syndromes, presented in SMT patients.

Key words: Substitution Maintenance Therapy, opioid dependence, non-psychotic psychopathology.

Introduction. The problem of opioid dependence in Ukraine begins in early 1990-th when, the condition of institutional collapse of government control became a background of drug traffic. In 1991 limited quantities of semi-synthetic opioids, in particular 3,6-diacetylmorphine, began to enter Ukraine. In the period of 1994-1996, the criminal industry of opium surrogates local production was formed in Ukraine.

Social and psychological factors associated with the social crisis of 1990-th in Ukraine combined with a lack of experience in the implementation of anti-drug measures and low public opioid awareness, had led to the spread of this class of narcotic substances in a broad social stratum [6, 7].

At the beginning of 2000-th, when systemic epidemiological studies of opioid dependence in Ukraine has began, there were 85 006 registered patients in the specialized narcological institutions. Following studies conducted in Ukraine indicated that major part of

opioid dependence cases does not fall into the medical and social statistics, what results in a significant difference in official data and the actual number of dependent persons whose contingent at the moment in Ukraine is close to 560 000 people [1, 6, 7].

Substitution Maintenance Therapy (SMT) has now received the status of a conventional treatment for opioid dependence in Ukraine. It has been introduced since 2005, and by 2018 more than 9,000 patients are systematically receiving SMT. Despite the systematic support of SMT, there is a discussion about the rationality, efficiency and safety of this method [1, 6, 7].

SMT contingent, due to its medical and social status, current health condition and specific medical history is prone to the massive impact of psychopathology predicting factors that realized on the background of personality altered with severe dependence.

According to the fact that cases of psychotic episodes in SMT contingent are fully registered due to the systematic observation, there is wide epidemiologic data that shows that the incidence of mental and behavioral disorders in SMT patients is significantly higher than in common population. On the other hand the non-psychotic psychopathology in persons who undergo SMT is typically dissimulated due to fear to reveal contraindications that could limit an access to program [3, 4, 5].

The data obtained in previous part of this study by applying the diagnostic tools for neurotic symptoms on the contingent of 100 SMT patients had shown that near 95% contingent are suffering from non-psychotic anxiety, depression, asthenia, conversion, obsessive and phobic symptoms of mixed origin [2].

Current stage of our study should reveal quantitative data on intensity of specific symptoms, its relations with background factors and describe its predictors.

Aim of the study is to characterize the manifestations, establish the intensity and describe the predictors of non-psychotic psychopathology symptoms in SMT patients.

Materials and methods. The study was conducted in a prospective design in the period 09.2016-03.2019 on the basis of “Regional Clinical Narcological Dispensary” Zaporizhzhya, Ukraine. The contingent of 100 patients diagnosed with ICD-10: F11.22 (Mental and behavioral disorders due to use of opioids, dependence syndrome, undergoing SMT). The study consisted of 20 women and 80 men. The mean age was $41,2 \pm 5,6$ years, the mean period of systematic use of opioids before SMT – $12,8 \pm 5,8$ years, the mean overall period of opioids use – $16,1 \pm 7,4$ years, the mean time on SMT – $3,3 \pm 2,0$ years.

Study was based on following methods: medical history analysis, clinical assessment with “Symptom Checklist-90- Revised” followed by unstructured psychodiagnostic interview

and statistical methods.

Results. The first stage of a study was focused on the analysis of contingent's medical history and current condition in key of psychopathology predictors search. As a result 5 groups of psychopathology predictors were systemized.

1. Exogenous – complex of factors that occur as consequence of SMT pharmacological agent continual use (direct side effects, withdrawal effects, cross-reactions with routine medications and alcohol). Exogenous factors cause the manifestation of affective (dysphoria, emotional liability, irritability, anxiety, depressive symptoms) and psycho-vegetative symptoms, that understood by patients as an abstinent condition.

2. Organic – complex of factors that occur as result of multiply brain impairments caused by traumatic injuries in aggressive social environment of dependent community, intravenous injections of handicraft opioids with chemically-aggressive side components (acids, red phosphorus, potassium permanganate, iodine etc.). Organic factors cause organic psychosyndrome (memory and concentration dysfunction, emotional liability, anxiety, specific thinking violations – torpidity, rigidity, inertness, pathological detailing).

3. Somatogenic – complex of factors that occur as a result of somatic pathology influence on psychic condition (anxiety, depressive symptoms, psycho-vegetative symptoms, fatigue, hypochondriac ideas, panic attacks).

4. Psychogenic – complex of psychological stress-factors that occur as a result of patient's social, financial, family dysfunction. Group includes various manifestations of typical neurotic spectrum (anxiety, depression, psycho-vegetative symptoms, dissociative symptoms etc.)

5. Personologic – complex of pathological personality transformations caused by influence of long-term opioid dependence state (severe motivation violations, adaptation to social environment of dependent community and psychosocial dysfunction). Factors of this group are presented as consistent motivational and behavioral deviations (demonstrability, impulsivity, mendacity, manipulative behavior etc.).

The analysis of influence of above mentioned groups of psychopathology predictors on different groups of non-psychotic symptoms according to SCL-90-R scales is presented on table 1.

Table 1

Role of psychopathology predictors in different groups in non-psychotic symptoms development (according to SCL-90-R scales)

| Scale | Group of predictors | | | | | Specified symptom characteristics |
|--|---------------------|---------|--------------|---------------|--------------|--|
| | Exogenous | Organic | Somatogenous | Psychoogenous | Personologic | |
| SOM | ↑ | – | ↑ | – | – | polymorphic psycho-vegetative symptoms combined with somatic manifestations of anxiety and depression, physical manifestations of opioid withdrawal and somatic symptoms |
| O-C | ↑ | ↑ | – | – | – | obsessive desire to drug intake, obsessive memories of drug-induced euphoria that cause frustration with the transition to dysphoria |
| INT | – | – | ↑ | ↑ | ↓ | an intense sense of social injustice that cause severe distress, but simultaneously could be used as an instrument of manipulative behavior |
| DEP | ↑ | – | ↑ | ↑ | ↓ | persistent depressed mood with anhedonia which tend to dysphoria, with the formation of mixed depressive-dysphoria conditions |
| ANX | ↑ | ↑ | ↑ | ↑ | ↓ | a combination of moderate persistent anxiety and paroxysmal states of intense anxiety that arise in psychoemotional exhaustion |
| HOS | ↑ | ↑ | – | ↑ | ↑ | a combination of persistent irritability and paroxysmal dysphoria of a mixed structure (aggression, impulsivity, demonstrativeness) with the transition to a condition of psychoemotional exhaustion |
| PHOB | ↑ | – | ↑ | ↑ | – | paroxysmal conditions of intense anxiety (panic attacks) with loss of self-control and intense psycho-vegetative symptoms that arise in conditions of exhaustion or frustration |
| PAR | – | ↑ | – | – | ↑ | suspicion that intensifies in the conditions of frustration and accompanied by a sense of social injustice, social sensitivity, pathological environment and stigmatization |
| PSY | ↑ | ↑ | ↑ | – | ↑ | anosognosy to psychopathological manifestations and loss of self-control in conditions of dysphoria and parkosismal alert |
| Note: "↑" – initiation or increase of the intensity, "↓" – reduction of intensity, "↑" – inconsistent effect "–" – the absence of significant influence. | | | | | | |

Next, to establish quantitative characteristics of non-psychotic psychopathology symptoms presented in contingent, a clinical assessment with “Symptom Checklist-90-R” was conducted (Tab. 2).

Table 2

Distribution of the contingent by the levels of manifestation
separate groups of non-psychotic psychopathology symptoms

| Scale | Value | | |
|------------------------------------|------------------------|-------------|-----------|
| | (≤0,50) | (0,51-1,50) | (≥1,51) |
| | number of patients (n) | | |
| Somatization (SOM) | 11 | 50 | 39 |
| Obsessive-Compulsive (O-C) | 11 | 71 | 18 |
| Interpersonal Sensitivity (INT) | 28 | 54 | 18 |
| Depression (DEP) | 12 | 50 | 38 |
| Anxiety (ANX) | 22 | 47 | 31 |
| Hostility (HOS) | 14 | 51 | 35 |
| Phobic Anxiety (PHOB) | 53 | 20 | 27 |
| Paranoid Ideation (PAR) | 21 | 47 | 32 |
| Psychoticism (PSY) | 35 | 42 | 23 |
| Global Severity Index (GSI) | 12 | 52 | 36 |

To establish the mutual influence on the intensity of manifestations of certain groups of psychopathological symptoms, a correlation analysis was performed (Tab. 3).

Table 3

The matrix of correlations for psychopathological symptoms
(according to SCL-90-R scales)

| | SOM | O-C | INT | DEP | ANX | HOS | PHOB | PAR | PSY |
|------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| SOM | 1 | | | | | | | | |
| O-C | 0,46 | 1 | | | | | | | |
| INT | 0,25 | 0,64 | 1 | | | | | | |
| DEP | 0,53 | 0,72 | 0,81 | 1 | | | | | |
| ANX | 0,61 | 0,78 | 0,62 | 0,78 | 1 | | | | |
| HOS | 0,27 | 0,69 | 0,56 | 0,66 | 0,71 | 1 | | | |
| PHOB | 0,41 | 0,70 | 0,63 | 0,66 | 0,79 | 0,68 | 1 | | |
| PAR | 0,22 | 0,64 | 0,67 | 0,68 | 0,76 | 0,75 | 0,73 | 1 | |
| PSY | 0,24 | 0,56 | 0,46 | 0,58 | 0,73 | 0,78 | 0,75 | 0,83 | 1 |
| GSI | 0,58 | 0,84 | 0,75 | 0,88 | 0,92 | 0,82 | 0,85 | 0,84 | 0,81 |

Note: weak correlation coefficient ($r \leq 0,50$) is marked by dark-gray; moderate ($r = 0,51-0,69$) – by light-gray; high ($r \geq 0,70$) – by none. Statistically reliable data ($p \leq 0,05$) – marked by bold font.

The analysis of correlations between psychopathological symptoms allowed revealing 6 symptom couples that correspondent to non-psychotic syndromes.

1. *Anxious-obsessive syndrome* is characterized by a combination of persistent moderate anxiety and an intensive desire of drug intake. Internal correlation of symptoms is high ($r = 0,78$; $p \leq 0,05$). Presented in 71 (71%) of the total contingent.

2. *Obsessively-sensitive syndrome* is characterized by a combination of intensive desire of drug intake and a severe sense of social injustice. Internal correlation of symptoms is moderate ($r = 0,64$; $p \leq 0,05$). Presented in 67 (67%) of the total contingent.

3. *Depressively-sensetive syndrome* is characterized by combination of decreased mood with anhedonia and a severe sense of social injustice. Internal correlation of symptoms is very high ($r=0,81$, $p \leq 0,05$). Presented in 67 (67%) of the total contingent.

4. *Depressive-dysphoric syndrome* is characterized by a combination of decreased mood with anhedonia and dysphoric paroxysms (aggression, impulsivity, demonstrativeness) on the persistent irritability. Internal correlation of symptoms is moderate ($r=0,66$; $p \leq 0,05$). Presented in 70 (70%) of the total contingent.

5. *Paranoicaly-dysphoric syndrome* is characterized by a combination of suspicion with pathological fixation on ideas and persistent irritability with dysphoric paroxysms. Internal correlation of symptoms is high ($r=0,75$; $p \leq 0,05$). Presented in 64 (64%) of the total contingent.

6. *Anxious-paranoic syndrome* is characterized by a combination of persistent anxiety and suspicion with pathological fixation on ideas. Internal correlation of symptoms is high ($r=0,76$; $p \leq 0,05$). Presented in 59 (59%) of the total contingent.

Conclusions.

1) non-psychotic psychopathological violations in persons undergoing SMT program have a complex multifactorial genesis, which leads to a distortion of their clinical manifestations which become specific;

2) predictors of non-psychotic psychopathology in persons undergoing SMT program could be systemetized into 5 groups (exogenous, organic, somatogenous, psychogenous, personologic) that makes multidirectional effect on clinical characteristics and intensity of psychopathological symptoms.

3) non-psychotic psychopathology in persons undergoing SMT program have a specific clinical profile – in the contingent of the study are presented all groups of psychopathological symptoms (according to SCL-90-R), but its intensity is generally moderate.

4) analysis of correlations between psychopathological symptoms (according to SCL-90-R assessment results) allowed revealing 6 symptom couples that correspondent to non-psychotic syndromes, which are: anxious-obsessive ($r=0,78$; $p \leq 0,05$), obsessively-sensitive ($r = 0,64$; $p \leq 0,05$), depressively-sensetive ($r=0,81$, $p \leq 0,05$), depressive-dysphoric ($r=0,66$; $p \leq 0,05$), paranoicaly-dysphoric ($r=0,75$; $p \leq 0,05$), anxious-paranoic ($r=0,76$; $p \leq 0,05$).

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