

There were no statistically significant correlations found between the length of the abstinence and the PLT data, which is probably due to a small number of patients (just 10) studied with PLT.

There were no correlations found between the length of the abstinence and indices of all psychological tests before KPT. That means only psychological changes induced by KPT (but not initial psychological characteristics of the patients) favored a sober lifestyle and a stable remission.

Thus, it is possible to conclude that KPT-induced psychological changes in alcoholic patients contribute significantly to the abstinence following the KPT. •

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**References**

1. Bazhin E.F., Golyunkina E.A. and Etkind A.M. (1993) *Locus of Control Questionnaire*. Smysl, Moscow (in Russian).
2. Crumbaugh J.S. (1968) Cross-validation of Purpose-in-Life Test based on Frankl's concept. *J. Individual Psychology* 24, 74-81.
3. Fransella F. and Bannister D. (1977) *A Manual for Repertory Grid Technique*. Academic Press, London-New York.
4. Krupitsky E.M. and Burakov A.M. (1996) Continued studies into underlying psychological mechanisms of ketamine psychedelic therapy (KPT). *MAPS Bulletin*, Vol.6, N.3, pp.19-21.
5. Krupitsky E.M. and Grinenko A.Y. (1997) Ketamine psychedelic therapy (KPT): a review of the results of ten years of research. *J. of Psychoactive Drugs*, Vol.29, N.2, pp.165-183.
6. Leontiev D.A. (1992) *Test of the meaning of life orientations*. Smysl, Moscow (in Russian).
7. Phares E.J. (1976) *Locus of Control in Personality*. New York.
8. Rokeach M. (1973) *The Nature of Human Values*. Free Press, New York.
9. Senin I.G. (1991) *Questionnaire of Terminal Life Values*. Yaroslavl (in Russian).

## The syndrome of anhedonia in recently detoxified heroin addicts: assessment and treatment

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IT'S IMPORTANT to note from the very beginning that methadone maintenance is not available in Russia. Therefore, the treatment of heroin addicts in the in-patient department of the Leningrad Regional Center for Alcoholism and Drug Addiction Treatment consists of two major stages: The first one is a treatment of withdrawal syndrome with antidepressants, tranquilizers, analgesics and clonidine, and the second one is supportive psychotherapy and pharmacotherapy to prevent a relapse.

In our clinical practice we noted that soon after the termination of withdrawal syndrome, many detoxified heroin addicts report having a specific state which can be described as a "Syndrome of Anhedonia" (SA). The SA includes affective, cognitive and behavioral components. The affective component includes tension, irritability, nervousness, anxiety, indifference, depression, psychological discomfort without cause, feeling that life is dull and empty, sleep disorders, and craving for heroin. The cognitive component of SA includes thoughts about heroin, memories about heroin, dreams about heroin, and imagining use of heroin. The behavioral component includes actions to acquire heroin, discussing heroin use with other addicts, and passivity.

We developed a special *Scale of Anhedonia Syndrome* (SAS) which has 17 items and consists of affective, cognitive and behavioral subscales. Responses to the SAS can range from "Not at all" to "Extremely" or from "Not at all" to "Very often."

Twenty eight recently detoxified heroin addicts who took a one and a half month in-patient course of support-

The "Syndrome of Anhedonia" includes

ing treatment in our Center were studied with the SAS on the 1st, 2nd, 4th and 6th weeks of abstinence (after their withdrawal syndrome was terminated). The standardized course of supporting treatment included individual and group psychotherapy as well as a pharmacotherapy (antidepressants, minor neuroleptics (like Melleril), and some patients followed a special course of transcranial electrostimulation enhancing the activity of endorphinergic brain system. This study demonstrated a presence of the SA in recently detoxified heroin addicts which persisted at least within the first six weeks after detoxification. The SA intensity gradually declines within the first month and a half after detoxification, and the cognitive component of the SA is the most stable one. To the end of the 6th week the intensity of the affective component had been reduced by 52%, the behavioral component by 76%, while cognitive component of the SA had been reduced only by 18% of its maximum level as a result of the six weeks of medication. It is important to note that intensity of both affective and cognitive components was still high in spite of six weeks of pharmacotherapy and psychotherapy.

We also studied the influence of ketamine-assisted psychedelic psychotherapy on the intensity of the SA in 10 heroin addicts. Ketamine-assisted psychotherapy is an existentially oriented psychotherapy carried out against the background of the conversion type peak experience induced by intramuscular

injection of a subanaesthetic (hallucinogenic) dose of ketamine (Krupitsky & Grinenko, 1997). Ten heroin addicts underwent ketamine psychotherapy 2-3 weeks after detoxification and had been studied with the *Scale of Anhedonia Syndrome* both before and after the ketamine psychotherapy. Ketamine psychotherapy significantly reduced intensity of all components of the SA,

indifference, depression, psychological discomfort without cause,

including the cognitive one. In terms of the influence on the affective and behavioral components of SA, ketamine psychotherapy was as effective as a regular standardized course of pharmacotherapy and psychotherapy. But ketamine psychotherapy as twice as more significantly reduced the intensity of the cognitive component of the SA in comparison to the regular (conventional) course of treatment.

Needless to say, the treatment of the SA in detoxified heroin addicts is an important aspect of relapse prevention. Therefore it is very important to find which drugs or other non-pharmacological treatment approaches are most effective to treat the SA. Further research in that direction seems to be very important, particularly for those countries where methadone maintenance is not available. Such research seems to be important also for those patients for whom methadone is not recommended. To study which particular pharmaceutical agent is most effective to treat SA is also important to discern subtle neuropharmacological mechanisms underlying the phenomenon of the SA.

A part of this study (the study of the influence of ketamine psychotherapy on the SA) was done with the support of a grant from the Multidisciplinary Association for Psychedelic Studies, for which we are very thankful. •

**Reference**

Krupitsky E.M., Grinenko A.Y. (1997). Ketamine psychedelic therapy (KPT): a review of the results of ten years of research. *Journal of Psychoactive Drugs*, 29(2):165-183.

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