Ketamine Assisted Psychotherapy (KPT) of Heroin Addiction: Immediate Effects and Six Months Follow-Up*

Krupitsky E.M.,
Burakov A.M.,
Romanova T.N.,
Strassman R.J.,
Grinenko A.Y.
St.Petersburg Scientific Research Center of Addictions and Psychopharmacology affiliated with St.Petersburg State Pavlov Medical University,
Leningrad Regional Center of Addictions, Novo-Dievatino 19/1, Leningrad Region 188661, Russia.
E-mail: kru@lond.spb.su

IN THE 20th CENTURY, while billions of dollars have been spent to treat addictive diseases, the search for effective medication continues. The mainstay of such treatments include therapy and counseling, AA and NA, different kinds of rehabilitation programs, drug maintenance programs, and pharmacotherapy. However, the rate of efficacy of all suggested methods of addiction treatment is poor and the need remains for new effective medications. The use of hallucinogens in the treatment of addiction could be one promising approach (Halpern, 1996).

Many studies from the 1950s and 1960s suggested that hallucinogen-assisted (psychedelic) psychotherapy might be an efficient treatment for the addiction (Grinspoon and Bakalar, 1979), but the variation in methodologies made it difficult to generalize across studies.

In the 1970s Savage and McCabe (1973) showed that LSD-assisted psychotherapy had a positive effect on the outcome of treatment of heroin addicts: 25% of the subjects treated with LSD remained abstinent from opiates for one year as opposed to only 5% of the control group of conventional weekly group psychotherapy.

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The dose of ketamine. These were 10 hours of pretreatment and the psychopharmacological effects were both short-lasting and

peaked during the ketamine session. These side-effects provided evidence for the presence of a pronounced effect of ketamine on psychopharmacological effects.

As such, the ketamine and control groups were similar in their baseline psychopharmacological effects.

All patients were seen to write a detailed self-report of their experiences during the ketamine session.

Treatment assessment:

The design and construction of an emotional-affective assessment procedure were introduced, with a particular emphasis on the role of specific measures for the assessment of emotional-affective changes in ketamine-induced psychopharmacological effects. These measures included the Hamilton Depression Rating Scale, the Hamilton Anxiety Rating Scale, the Beck Depression Inventory, the Beck Anxiety Inventory, the State-Trait Anxiety Inventory, the Profile of Mood States, the Positive and Negative Affect Scale, the Brief Symptom Inventory, the Life Satisfaction Index, and the Quality of Life Inventory. These scales were used to assess the emotional-affective changes that occurred after ketamine administration.

A model for the assessment of emotional-affective changes in ketamine-induced psychopharmacological effects was developed, which allowed for the qualitative and quantitative assessment of emotional-affective changes. This model included the following steps:

1. Identification of emotional-affective changes:
   - The identification of emotional-affective changes was based on the subjective reports of the patients and the objective measures of the emotional-affective scales.

2. Qualitative analysis:
   - The qualitative analysis of emotional-affective changes was based on the subjective reports of the patients and the objective measures of the emotional-affective scales.

3. Quantitative analysis:
   - The quantitative analysis of emotional-affective changes was based on the objective measures of the emotional-affective scales.

4. Integration of qualitative and quantitative analyses:
   - The integration of qualitative and quantitative analyses was based on the subjective reports of the patients and the objective measures of the emotional-affective scales.

5. Interpretation of emotional-affective changes:
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psychotherapy provided before the ketamine session in order to prepare patients for the session. There were up to 5 hours of psychotherapy provided after the ketamine session to help patients interpret and integrate their experiences during the session into everyday life.

An anesthesiologist was present throughout the ketamine session to respond to any complications. The length of the ketamine session was about 1.5 - 2 hours. Only one ketamine session was carried out for each patient. The patient was instructed to recline on a couch with eye-shades. The pre-selected stereophonic music was used throughout the ketamine session. The psychotherapist provided emotional support for the patient and carried out psychotherapy during the ketamine session. Psychotherapy was existentially oriented, but also took into account the patient's individuality and personality problems (Krupitsky and Grinenko, 1997). The same psychotherapeutic technique (see below) was used regardless of the dose of ketamine. Patients were discharged from the hospital soon after the KPT.

**Description of the psychotherapeutic technique**

Three main stages in our method of KPT can be distinguished (Krupitsky and Grinenko, 1997). The first stage is preparation. In this stage, preliminary psychotherapy is carried out with patients. During these psychotherapeutic sessions it is explained to the patients that the relief of their dependence from heroin will be induced in a special state of consciousness in which they will have deep experiences that will help them to realize the negative effects of heroin abuse, and the positive aspects of life without drugs. We explain that the ketamine session may induce important insights concerning their personal problems, their system of values, notions of self and the world around them, and the meaning of their lives. All of these insights may entail positive changes in their personality, which will be important for their shift to a new lifestyle without heroin. During the ketamine sessions, patients often experience the separation of consciousness from the body and the dissolving of the ego, so it is very important to prepare patients carefully for such an unusual experience. The therapist pays close attention to such issues as the patient's personal motives for treatment, his goals for his new life without drugs, his idea of the cause of his disease and its consequences, and so on. An individually tailored "psychotherapeutic myth" is formed during this dialogue. It becomes the most important therapeutic factor responsible for the psychological content of the second stage of the KPT. It is also very important to create a specific atmosphere of confidence and mutual understanding between the psychotherapist and patient during this first stage of KPT.

The second stage is the ketamine session itself. With a background of special music (generally, "New Age" composers, such as Kitaro and Jean Michel Jarre) the patient having a KPT session is treated psychotherapeutically. The content of these psychotherapeutic influences is based on the concrete data of the patient's anamnesis (case history) and is directed toward the resolution of the patient's personality problems and toward the formation of a stable orientation towards the life without drugs. We try to help our patients create a new meaning and purpose in life during this session. We emphasize the positive.

**Subjects in the low dose group demonstrated affective and cognitive effects that were close to a psychedelic dose of DMT.**

This is a strong statement about the importance of set and setting in determining the responses to hallucinogenic drugs.

values and meaning of life without drugs and the negative aspects of drug abuse during ketamine session. It is also very important to direct carefully the patient's psychiatric experiences by verbal influences and manipulating the musical background towards the symbolic resolution of the personality conflicts as well as a final cathartic peak experience. This second stage of KPT is conducted by two physicians, a psychotherapist and an anesthesiologist, because some complications and side-effects (such as increased blood pressure and depression of breath) are possible, though exceedingly rare. After the session, the patient rests, and we ask them to write a detailed self-report of their experience later that evening.

In the third stage, special psychotherapeutic sessions are carried out within several days after the KPT session. During these sessions the patients discuss and interpret the personal significance of the symbolic content of their experience with the psychotherapist. This discussion is directed toward helping the patient establish a connection between their ketamine experience and their intra- and interpersonal problems (primarily those connected with drug abuse), and thereby to solidify their desire for a life without drugs. We try also to assist patients to integrate the insights from the ketamine session into everyday life. The uniquely profound and powerful ketamine experience often helps them to generate new insights that enable them to integrate new, often unexpected, meanings, values and attitudes about the self and the world.

**RESULTS AND DISCUSSION**

**Characteristics of the ketamine experience**

Content and features of the ketamine experience in both groups were evaluated with the Hallucinogenic Rating Scale (Strassman et al., 1994). HRS scores in the
First three months...
anhedonia more quickly than did traditional treatment with selective serotonin reuptake inhibitors (SSRIs) which takes at least three weeks. Also, KPT reduced the severity of all components of the anhedonia syndrome, including a cognitive one, while SSRIs influence mostly affective and behavioral components (Krupitsky et al., 1999).

**KPT influence on anxiety and depression**

KPT in both experimental and control groups significantly reduced elevated pre-treatment levels of both state and trait anxiety, measured with the Spielberger Anxiety Scale and depression, measured by the Zung Depression Scale. The level of anxiety was within normal limits by six months of abstinence in both groups. The level of depression was relatively low within the first six months after KPT in both groups.

**KPT influence on personality**

KPT in the experimental group produced a decrease in scores for the following MMPI scales: depression, conversion hysteria, paranoia, schizophrenia, and Taylor scale of anxiety. The self-sufficiency score significantly increased after KPT. On the whole, such favorable psychological dynamics suggest that patients became more sure of themselves, their possibilities and their futures, less anxious, less depressed and neurotic, and more emotionally open after KPT. These changes are very similar to those noted in alcoholics after KPT (Krupitsky and Grinenko, 1997) and are favorable for abstinence. KPT in the control group decreased scores of the following scales hypochondriasis, depression, conversion hysteria, masculinity-femininity, paranoia, psychasthenia, schizophrenia, sensitivity-repression, and Taylor scale of anxiety. The self-sufficiency score significantly increased after KPT. Positive MMPI changes in the control group were similar to those in the experimental group and included even more scales. However, the scores for the lie scale significantly increased while those for the validity scale decreased in the control group. This may mean that control group patients tried to present themselves in a more positive, more socially acceptable way while they were answering MMPI questions after KPT. Thus, positive MMPI changes in the control group might reflect to some extent patients’ desire to be appear in a more positive light.

**KPT influence on the terminal life values**

KPT’s influence on the terminal life values was assessed with the Questionnaire of Terminal Life Values (QTLV) developed by Senin (1991), based on the Rokeach’s approach to human values and beliefs (Rokeach, 1973). KPT in the experimental group caused a significant increase in the importance of values such as social recognition, creativity, social contacts, and individual independence. These factors were particularly relevant to areas of life values such as actualization as professional, educational and social life. KPT in the control group brought about significant increases in the importance of social recognition, creativity, self-perfection, achievement of life purposes, spiritual contentment, and individual independence. These changes were significant in all five areas of life values actualization. KPT-induced changes in the control group included even more QTLV scales than in the experimental group. However, the scores for individual independence and educational area of life values actualization were significantly greater after high, compared to low dose KPT.

**KPT influence on understanding the meaning of one’s own life**

KPT influence on understanding the meaning of one’s own life was assessed using the Purpose-in-Life Test...

...It might be possible that repeated sessions carried out within the first few months after KPT would provide a higher rate of abstinence.

(PLT) based on Frankl’s (1978) concept of the individual’s aspiration for meaning in life. The PLT was adapted in Russian by Leontiev (1992). KPT caused a significant increase in the indices measuring understanding the meanings and purposes in life, as well as self-actualization, and the ability to control oneself and one’s own life in accordance to those life purposes. PLT changes after KPT were similar in both groups. This means that after KPT (regardless of the ketamine dose) patients were better able to understand the meaning of their lives, their life purposes, and perspective. After KPT, their lives became more interesting, emotionally deeper, and filled with meaning. They felt themselves better able to live in accordance with their concept of the meaning of life and life purposes as a result of KPT. Such changes might favor abstinence from heroin, particularly from the standpoint of Frankl’s approach, which considers alcoholism and addictions as an “existential neurosis,” consequent to losing the meaning of life as well as the appearance of an “existential void” (Frankl, 1978). We believe KPT is able to fill in this void at least to some extent.

**KPT influence on spirituality**

A psychedelic ketamine experience is to some extent similar to the near-death experience (Jansen, 1997); it might be transformative and induce changes in spiritual development and even in worldview (Krupitsky and Grinenko, 1997). KPT effects on the spiritual development of heroin addicts was studied with the Spirituality Changes Scale (SCS). This instrument previously demonstrated a positive influence on spirituality by KPT in
In conclusion, the evidence for the association between psilocybin and certain psychological outcomes is promising. However, further research is needed to understand the mechanisms underlying these effects and to determine the optimal conditions for their implementation. The question of whether these effects are specific to psilocybin or extend to related compounds remains to be explored. Overall, the results suggest that psilocybin may have therapeutic potential for a range of psychological conditions, but more comprehensive studies are required to support these findings.