
Ketamine Treatment for Depression Concomitant with Severe Dental Problems

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1. Introduction

Depression is frequent in developed populations and probably unrecognized in more undeveloped ones. Using psychometric tests of depressive traits indicate that some 20% of the population are affected during a lifetime. The spectrum of treatment options includes therapy sessions with a great variety of therapists, medications, resident stays in psychotherapy inclined facilities and electroconvulsive treatments (ECTs). Increasing social and economic capabilities are paramount on top of the treatments chosen. The clinical effect of the different treatment options goes from the antidepressive to the ECT. In the middle we find the anesthetic ketamine.

Ketamine in low doses given intravenously or intramuscularly is a novel treatment opportunity with effect size between antidepressive medication and electroconvulsive treatment [1].

Whether concomitant severe, local dental infection reduces the effect of ketamine-injections has not been reported. Such a case is reported here.

2. Material and Methods

Woman, born 1991, living alone with a child (10). The mother and father of the case had severe alcohol abuse problems, and her schoolmates new about this and harassed her to the level of traumatic stress. Though, the family home had no financial problems. She had contact with psychological service of the school and the community, and they gave a diagnosis of hyperactivity and attention deficit (ADHD), but no relevant treatment was instigated. This led to a reduced performance level

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in school, and probably also to her difficulties in establishing a stable working life. Her acquaintances did not contribute to stability because of drug use and some criminal activity. Anxiety, depression, and sleeplessness troubled her.

Last year she was finally diagnosed with the ADHD she had had since her childhood and started with methylphenidate and later lisdexamphetamine. Her depressive mood persisted and treatment with intramuscular ketamine was proposed. Physically she was fit for such treatment, but a local dental infection was a concern. Dental treatment is not part of the National Health insurance system in Norway and the costs of dental treatment surpassed her financial capacity.

A joint decision was made to try out intramuscular ketamine injections. The case underwent a clinical examination before the treatment was given. No other mental or physical illness was present.

The dose of ketamine given was within recommended doses of between 0.5 mg and 1.0 mg per kilo body weight. She had a body weight of 80 kg. Thus between 6 ml and 7,2 ml of ketamine was injected, see [1].

3. Results

Five sessions of intramuscular injections with ketamine were given. An assessment with Beck Depression Inventory was done before each treatment. The sums were 44, 20, 11, 5 and 20 respectively. 44 indicates a severe depression, 20 a moderate depression and 11 no active depressive traits present.

She had vivid and detailed mental pictures and moves under the influence of ketamine. The duration of all five sessions was around 40 minutes before waking up.

4. Discussion

Ketamine infusion revealed possible explanations to former traumas and significant occurrences in the former life of the case. These explanations gave usable information for future psychotherapeutic work. Although she also suffered from dental infection during the treatment period, her BDI score diminished to normal level before it again attained medium depression level, probably due to worsening of the dental condition. In a systematic review Almeida et al. indicated that the post-traumatic stress as in the current case may be alleviated with ketamine treatment [2].

The notion of depression, which was the diagnostic basis for the procedure, is often not a sufficient description of the variety of the underlying illness and suffering. Both PTSD and ADHD like symptoms may contribute to the diagnosed depression as seen in the present case. The progress of psychotherapeutic treatment may be augmented by the information given after a ketamine injection session. Especially after the recommended four to six sessions.

Intramuscular or intravenous treatment with ketamine may thus be relevant in more cases than those presenting with a simple unipolar depression. Even with concomitant local infectious diseases.

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