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Case Report

The Use of High-intensity Motivational Enhancement Therapy to Improve Treatment Adherence and Outcome in Poly-substance Use: A Case Report

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ABSTRACT

Poly-substance users can benefit significantly from the pharmacological treatment, but adherence to treatment can be challenging on the outpatient treatment basis. However, motivation to change has been implicated as a crucial element in substance use treatment outcomes. Motivational Enhancement Therapy (MET) is an approach that is used to increase intrinsic motivation to change by resolving patients' ambivalence and is the most effective psychosocial treatment for substance use disorders. The aim of reporting this case study was to evaluate the effect of higher sessions of MET in poly-substance or multiple drug use disorder. The patient presented with a long history of substance abuse with multiple treatment failures and therefore multiple sessions of high intensity MET were planned. The goal of the high-intensity MET intervention was to increase the success of the ongoing pharmacological treatment by improving treatment adherence along with the main component of increasing the client's motivation to change. Outcome measures included treatment adherence according to OPD records, clinicopathological results such as urine toxicology measures, and self-report measures of substance use disorders. Furthermore, the motivational measures also suggested the patient's increased motivation to change and improved treatment compliance following the increased MET sessions. This case report adds to the existing literature regarding the use of high-intensity motivational interventions to enhance treatment adherence and outcome with increased readiness for change in the cases of poly-substance or multiple drug use disorders.

KEYWORDS: Poly-substance use, MET, motivation

INTRODUCTION

Poly-substance or multiple drug use has become a major public health issue and a focus of specific psychosocial interventions in recent years. Poly-substance use is increasingly getting more prevalent our society.[1-4] People with multiple drug use problems often have mixed thoughts or feelings about the effect of their use. They generally enjoy positive experiences but some of them may perceive some negative experiences with respect to their overall health, social and occupational functioning.[5-7] However, the majority of them may remain in an ambivalent position regarding the drug use and resolving or working through this

ambivalence which is a crucial aspect of MET. Moreover, adherence to treatment protocol in patients with multiple drug use has now become a major concern in most of the outpatient clinical settings. MET is a brief therapy for treating substance use-related problems that is usually based on the stages of the motivational change. Several studies have demonstrated the efficacy of MET in resolving the ambivalent attitude, enhancing motivation for change and subsequent reduction in substance uses.[8-10]Given the widespread prevalence of multidrug use, it is very crucial to incorporate MET in treatment module which offers an approach that matches the characteristics of the patient and clinician's effective strategies to support change. Research in the area of motivational enhancement in treatment of poly-substance use is lagging, which warrants the incorporation of this crucial element in the prevention of the same.

High intensity psychotherapy or counseling has been found to be effective in improving the treatment outcome in some complicated cases.[11] Especially MET with higher intensity sessions predicts better treatment adherence and outcomes in substance users.[12] For more than two decades research studies have pointed to notably few differences in outcome between more intensive and less intensive brief psychosocial interventions.[11-14] Intrinsic motivation or readiness for change has been implicated as a crucial ingredient in the treatment outcomes of substance use disorders. Many substance treatment protocols contain common ingredients which bring about motivation to change that typically include the six motivational components and have been described with the acronym FRAMES i.e. feedback, responsibility, advice, menu of options, empathy, and self-efficacy.[15] These motivational ingredients are consistent with several research findings on what motivates complicated drug abusers for change.[14,16] However, most of the treatment compliance strategies utilizing motivational ingredients in the substance use disorders have been conducted on single drug use. In this case report we incorporated and utilized the elements of MET with high intensity in order to improve treatment outcome in multiple drug use disorder wherein the patient had very poor treatment adherence.

CASE HISTORY

Mr. RD, a 35-year-old Hindi speaking right-handed Hindu married male, educated up to 10th std, dairy farmer by occupation, from a rural background was brought by his wife and brother-in-law to the Psychiatry outpatient department of a tertiary care center in the northwestern part of India with complaints of reduced sleep, vomiting, loose-stools, sweating, body ache and reduced appetite for 3 days. A detailed clinical history and examination revealed no significant systemic abnormalities, and showed long standing history of intake of multiple psychoactive substances by the patient.

As reported by the patient he had been consuming 'bhaang' (cannabis pellets) from the age of 15 years. He started consuming cannabis at a young age because it was freely available and also because he enjoyed its pleasurable effects. He continued to consume 1-2 pellets of cannabis per day for next 5-6 years after which he started consuming alcohol and smoking cigarettes. Initially he would consume 3-4 cigarettes per day and about 1-2 bottles of beer per week in the company of his friends just for fun. Over the course of next 7-8 years his intake progressed as he developed tolerance to the substances, to 1-2 packets of cigarettes and about 2-3 quarters of Indian manufactured foreign liquor every day. He continued to consume cannabis during this time, however, as per the patient; his preferred drug of choice was alcohol. On the insistence of his family members, he underwent treatment for his addictive behavior. He was admitted in the hospital, given intravenous fluids, oral and/ or injectable medications as per need for acute management, along with multiple motivational counseling sessions. He was abstinent from alcohol and cannabis for about 2 months when he relapsed during a festival celebration because he thought that he had achieved control over his drinking. His poly-substance use soon reached pre-treatment levels. He gradually developed dependence on these substances he experienced withdrawal symptoms in the form of early morning tremors, insomnia and restlessness, and required an eye opener drink and a smoke for bowel movements. He even started drinking country made liquor and smoking *'bidi'* (cheaper cigarette) because of shortage of money. However, he denied having any history of black outs, withdrawal seizure, black stool or blood in vomitus.

Around two years back he was apparently introduced to 'brown sugar' (heroin) by his friends. He tried it out of curiosity after he was told that its pleasurable effects are comparable to a state of complete relaxation. Initially he was injecting heroin intravenously only occasionally, but within a few months, he starting injecting almost every day. He then started mixing heroin with Avil (chlorpheniramine) before injecting to prevent any serious adverse effects. During this time, he started borrowing money from his relatives and friends in order to sustain his substance intake. According to his wife, he allegedly sold some of her jewelry to repay the loans and buy more drugs. He was admitted in a hospital a year back where he underwent detoxification and discharged after 10 days. He was advised weekly visits for titration of medications and motivational counseling/therapy sessions. He followed-up with the treatment plan for 2 weeks before relapsing again. Patient stated that from the past 4-5 months he has been struggling with low mood, reduced motivation and a general lack of interest. He stopped going to work and spending time with his spouse, children or other family members. Allegedly, there was property dispute amongst his family members owing to his behavior.

Overwhelmed with all the problems, patient decided to stop consuming all substances three days back, following which he developed pain in both calves and thighs, progressing to generalized body ache, throbbing headache and a fever. This was followed by watering from eyes, sweating, intense feeling of restlessness, insomnia, stomach ache with vomiting and loose stools the next day. For these symptoms of opioid

withdrawal, patient was taken to a local doctor where he was provided supportive treatment of intravenous fluids and some injectable medications, details of which were not available. He was then referred to this hospital for further management.

On examination, patient was conscious, cooperative and alert. He was afebrile, with a pulse of 90 beats per minute and blood pressure of 100/70 mmHg. General medication examination was remarkable for chills, sweating, non-specific generalized body ache, nasal stuffiness, nausea with abdominal cramps, slight tremor and lethargy. Pupils were of normal size and reactive.

On mental status examination he appeared restless and older than the stated age, unkempt with inadequate grooming and of thin built. Eye to eye contact was initiated but poorly maintained. Rapport could be established slowly. His speech was spontaneous, comprehensible, coherent and relevant; and the rate, volume and tone of speech were reduced with increase in reaction time. Patient's mood was reported as unwell and affect was anxious, significantly distressed and congruent to his thoughts. He was preoccupied with concern for his withdrawal symptoms. There was no evidence of any formal thought disorder and he denied having any perceptual abnormality. His higher mental functions were intact and his motivation level was ascertained to be in the contemplation stage.

MANAGEMENT

Patient was admitted in Psychiatry ward for acute management of withdrawal symptoms. The investigation reports were Hb – 12 gm%, WBC count – 15,800/mm^3, DLC – $N_{77}L_{17}M_2E_3B_0$, platelet count – 3.32 lakh/mm^3, COVID-19 PCR/HIV/ HBsAg / HCV/VDRL – negative, and score on clinical opiate withdrawal scale (COWS) was 14.

Initially he was given symptomatic treatment with adequate fluid replacement to control the withdrawal symptoms: Pantoprazole + Domperidone, Lorazepam (for restlessness), Paracetamol (for somatic pains), Ciprofloxacin + Tinidazole, Quetiapine (hypnotic effect), Promethazine (anti histaminic), injection multivitamin with normal saline and ringer lactate solution. On day 2, his COWS score was reduced to 6. Day 4 onwards, as his physical condition had improved (COWS: 2), we started with motivation enhancement therapy (MET) on day 6. Since there was a history of poor adherence to treatment, irregular follow up with multiple treatment failures in the past, it was decided to conduct a high intensity MET during this time. On day 8, he was discharged and advised to follow up with regular sessions. Total 10sessions of MET were planned, which consisted of carefully individualized treatment sessions. In the first two consecutive sessions, the client's spouse and significant family members were included. These sessions were also focused on identification of underlying problem utilizing reflective listening, eliciting self-motivational statements, preparing the patient feedback from the problems associated with his multiple drug use, his level of consumption and related symptoms or side-effects and future plans of the patient. The subsequent sessions were continued for motivation enhancement process for increasing patient's motivation to initiate or continue change and working toward reinforced commitment to change. In the next 6 follow through sessions i.e., at week 3, 4, 6, 8, 10 and 12, we continued to monitor and encourage progress and reminded the patient about all the problems he went through when the patient was on drugs. We conducted a total of10sessionswithin approximately 90 days including follow up sessions. Feedback from client's spouse, significant family members, Substance Use Calendar (SUC), urine toxicology and motivational outcome measures were used to record substance use at each follow up. Post assessment of outcome measures revealed significant improvement in overall behavioral change.

DISCUSSION

Dependence on multiple drugs such as cannabis, alcohol, nicotine and/or other substances is a commonly encountered problem in drug de-addiction services. Hence, prolonged and multiple drug dependence warrants special attention because treatment planned for one substance abuse alone is unlikely to lead to the stoppage of other substance use and result in varying degrees of unsuccessful treatment attempts.Adding additional inputs of motivational enhancement sessions in improving treatment adherence and overall outcome in difficult cases is a robust factor in managing substance use disorders comprehensively. Albeit, there is a considerable dearth of research findings in poly-substance use disorder with respect to MET. In the present case,we have tried to identify specific motivational hurdles to treatment adherence and addressed the same. MET sessions are close-packed in duration and have been designed for addressing different levels of motivation and readiness to change where decision making is considered to be a vital process in behavioral change. MET approach has been designed to elicit, clarify, and resolve ambivalence in a person-centered and respectful manner.[14] Furthermore, MET approach is considered particularly useful with individuals labeled very difficult, resistant,unmanageable and unmotivated.[17, 18] For these reasons, MET appears to be a well-suited approach for these patients. We suggest that clinicians should add more MET sessions than usual in order to improve the treatment adherence and outcome in substance use disorders.

CONCLUSION

High-intensity MET may be effective in enhancing motivation and resolving ambivalent attitude in the management of multiple drug use. Especially with respect to poly-substance use, higher dose (high intensity) MET is sometimes warranted to meet the client's needs. Furthermore, treatment strategies for clinical population with poly-substance use will benefit largely, if the extent of help offered through existing structured MET sessions for particular maintaining factors, is known.

CONFLICTS OF INTEREST: None

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