Title – Therapeutic Intervention for Opioid Dependence: Dialectical Behaviour Therapy (DBT) Case Study

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Running title – DBT for opium dependence

ABSTRACT

Background – Opioid dependency is a serious public health concern. India is one of the largest legal producers of opium and has an established pattern of use of opioid group of drugs. Opioid substitution therapy (OST) has displayed better outcomes compared with other existing treatment strategies. Dialectical Behavior Therapy (DBT) is a fast growing treatment modality used more and more to help individuals overcome addiction and maintain recovery.Substance dependence or addiction is more than the physical dependency on substance, implementation of DBT intervention for SUDs should be considered as a part of treatment as it focus not only on core psychological elements which leads dependence but prevent relapse and maintain abstinence.

Case presentation – This case study is about AB, 32-years old, male who sought care for opium dependence (smack). His chief complaints included difficulty in controlling and managing urge to take substance, experiencing withdrawal symptoms, guilt, and strained relationship with his wife and low mood. Psychological Assessment was done using Severity of dependence scale (SDS), Brief-Cope Questionnaire, Emotional Regulation Questionnaire (ERQ) and Interpersonal Competence Questionaaire-15 (ICQ-15). DBT skills were applied over the period of 2 months (13 sessions) along with TAU. Outcome of the intervention showed a decline in dependence levels, increased distress tolerance, better emotional regulation and interpersonal competence skills. The patient showed decrease drug dependency, maintain abstinence and improved skillful behavior.

Conclusion- Thus, It seems that DBT skill training increase the effectiveness of pharmacotherapy and work on psychological elements of substance dependency to enhance over all wellbeing of the patient. Skills taught in DBT do seem to support the needed foundation of substance Dependence treatment; motivation for change, motivation to continue in treatment, and staying mindful of high-risk situations.

Keywords: Clinical Psychiatry, DBT, Distress tolerance, Emotional regulation, mindfulness, Opioid dependence.

Introduction

1.1 Dialectical behavioral therapy

Dr. Marsha linehan in 1980 developed the Dialectical Behavior Therapy which focuses on both cognitive and behavioral aspects of the psychological treatments. "Dialectical behavior therapy (DBT) is an inclusive treatment program which helps the patients in their efforts to build a life worth living". A successful DBT intervention helps the patient learning to predict, communicate, pursue, and maintain goals that are independent of their history of out-ofcontrol behavior, including substance abuse, and cope better with life's day to day problems(Dimeff, 2008).Dialectic behavioral therapy (DBT) is a stem of psychotherapy entrenched in several modifications and additions to the principles of cognitive behavioral therapy (CBT)(Cavicchioli et al., 2019).The style of treatment was initially developed to help people with borderline personality disorders (BPD), but successfully treated with or independent conditions from BPD including: Depression, Bipolar disorder, Stress disorder post-traumatic, Anxiety disorders, Eating disorders and Substance use disorders(Cristea et al., 2017).

DBT is a psychotherapy that balances validation and recognition together with cognitive strategies of behavioral change. DBT focuses on larger therapeutic goal than decline in problem behaviors, symptom management or reassurance of the client. The core principle of DBT is to promote two opposed goals for patients which are: change and acceptance"(Kronemyer, 2017).In the initial controlled trial of Linehan people treated with BPD, DBT proved to be efficacious to decrease their behavior in themselves and their stationary psychiatric days(DeCou et al., 2019). The use of DBT in population groups with othermental disorders diagnosis and treatment has been recently increased in clinical settings. In clinical study, DBT has demonstrated: Effective drug addiction and opioid use reduction enhance elderly depression and coping ability adaptive(Lynch et al., 2003), improved likelihood of completion and hospitalization among suicidal adolescents(Linehan, Henry Schmidt &Linda, 1999).

1.2 Opioid dependence and rising problem in India

The use of psychoactive substanceshas been part of human civilization for thousands of years. In India, a range of psychoactive substances have been used for hundreds of years, such as alcohol, cannabis and opioids. The pattern and dimensions of use of such psychoactive substances, however, have taken on pathological proportions in modern times. Opium is prevalent, refined as heroin or other illegal substances. Synthetic drugs (smack, fentanyl, etc.) are popular among those too poor to afford heroin.

The scale of the problem is undeniably immense and worrisome. among the illegal substances, opioid dependence is the highest contributor to the number of disability-adjusted-life-years lost (9.2 million) and to drug-related deaths (43.5 deaths/million people aged 15–64 years)(Rao, 2017). The national survey of India (2004) published estimates the frequency of current opioid use to be 0.7% in general population. This parallels to 2 million current opioid users and 1 million of them are opioid-dependent (Kermode et al., 2011)(Wittchen et al., 2008)[.] Another concern is route of administration of opioids which is injecting. There are about 12 million injecting drug users (IDUs) globally, who face some of the most severe harms including blood-borne infections, HIV, hepatitis C and deaths due to overdose(Wittchen et al., 2008).

1.3 Opioid substitution therapy as treatment option

During the past decade, significant changes have occurred in the treatment and care structure for opioid addicts. Over the past ten years there has been greater emphasis on the introduction of ambulatory methadone maintenance therapy (MMT) and buprenorphine maintenance (BMT) for treating opioid dependents, in addition to a broad range of existing drug free psychosocial abstinence programs(Ghosh et al., 2018).

Opioid substitution therapy (OST) is the most evidence-based treatment for opioid dependence in pharmacotherapy. Although available in India for about three decades now, Indian research on this treatment modality has not been adequately reviewed so far. Some argue that OST existed in India even before the United States started to use methadone as an OST and that the opium registry was similar to today's OST. India has rich clinical experience in OST and large-scale OST programmer implementation expertise. Different OST models (stand-alone NGO centers, stand-alone government centers, and the NGOgovernment hospital collaborative model) have been tried and found to be feasible and useful(Kathiresan et al., 2019). Most OST model models in India have adopted a "lowthreshold" approach which is consistent with current science, providing OST with no undue and strict entry criteria on an outpatient basis. Patients who use illegal opioids on OST are not punished but are optimized for their dose. Even if you want to restart OST after relapse, smooth re-entry is provided. In India various materials for capacity building such as training modules and clinical guidelines were also developed, tested and applied. Therefore, we now have the necessary recipe for a successful OST programmer. Most of these models and tools have been developed and finished with domestic expertise. The availability of OST services in some government hospitals ensures the clinical exposure of young psychiatrist trainees to OST. Agonist maintenance treatment with opioids (commonly referred to as opioid substitution therapy [OST] in India(Durjava, 2018), has displayed better outcomes compared with other existing treatment strategies but is not focused on holistic well-being of the OST patient. helps the patient to bepartandcontinuethetreatmentbyjustreducingintakefrequencyofopioidsand othersubstances.

Case Presentation

In the present case report, DBT was given to a male patient (AB) aged 32 to reduce his opioid dependence. AB had Transportation Company in Delhi. He recently presented for treatment

at the psychology training clinic with his wife and was concerned that use of smack (opioid) was interfering with his daily living and has destructed his married life and family as whole. He got married in March 2016 and was living with his wife. His parents lived in Punjab. In June 2017, AB met one of his business client, he wanted to settle this deal as it would help him expand his business and make more profit. This client as told by AB was very social and outgoing, he was a chain smoker and use to drink occasionally. Because of their business deal AB met him quite often and started going out with him for dinners and social get together. After 3 months of getting to know that person on a personal level he started doing business with him and in November 2017 he went on a trip with him along with two other people. On that trip AB for the first time smoked marijuana and consumed alcohol. As reported by him for those 15 days he smoked marijuana and cigarettes almost on regular basis. Returning from that trip AB's wife reported that he seemed bit pre occupied and would often come home late. AB mentioned that on New Year eve that person asked him to try and smoke smack (opioid). He reported that by that time he had such a good rapport with him that without giving any second thoughts to it he just smoked it. He described that it relaxed him, he felt as if he was the happiest and felt light as a feather. He told being drawn towards it and wanted to consume it again. Initially for few months he was doing it occasionally (0.3-0.5gms) with that person (twice or thrice a month). Later he was very overawed by it and escalated to consuming it on weekly bases. He started buying smack and was consuming it 3-4 times a day (0.5 grams at a time). He was consuming 1.5-2 grams smack throughout day. He reported about his increased craving, decrease in appetite, sleep disturbances, bowl disturbances, heaviness in head and body and watery eyes in the absence of dose. He would often lie to his wife for coming home late and would at times not come back at all. His wife reported that he started becoming more aggressive, and would come home much disoriented and would at times say irrelevant things. He was often shaking and sweaty and would breathe shallow. He was smoking around 10-14 cigarettes a day. It continued for more than a year, buying smack, using it and hiding from his wife. He started feeling extremely guilty about his dependence and how dysfunctional he becomes when tried quitting. He did repeated attempts to cut down or quit but would fail every time due to horrifying withdrawal symptoms (tremors in the hand, hot and cold flushes, increased heart rate, restlessness, decreased appetite, increased craving, and inability to sleep, irritability and eventually would feel low). His health conditions started deteriorating severely from January 2019. He started facing more trouble at home and work. He developed tolerance to it and would smoke more smack in order to get the same high. He was now consuming 2.5-3 grams smack in a day. He

reported severe withdrawal symptoms: Jitters, Chills, Vomiting and diarrhea, Bone and muscle pain, Trouble sleeping, cold flashes, Leg movements that he couldn't control.AB's wife decided to get separated in August 2019 and that is when he confessed about his dependence to on smack (opium) to her for past1.5 year. Also that he was unable to quit and felt emotionally and mentally waned. His wife and his parentswere completely shaken and terrified. They immediately approached for AB's treatment in Delhi itself.

The present case was assisted at a psychiatric centre in West Delhi (September, 2019). His chief complaints included difficulty in controlling and managing urge to take substance, experiencing withdrawal symptoms, guilt, and strained relationship with his wife and low mood. The patient reported first consumption of opioid at the age of 30 years. He felt low self-image and said he cannot forgive himself for making his family go through this. AB stated that his last intake of opioid was 4 days prior to the day of appointment and that he was fully committed to get treatment and be healthy again.

Mental Status Examination

Patient was kempt, maintained eye contact, cooperative, attention was aroused and sustained. Speech was relevant, coherent and goal directed with normal reaction time. Affect was congruent and appropriate. Cognitive functions were intact (memory, attention, orientation, intelligence). No thought or perceptual abnormalities were found. Personal and Social Judgment were partially intact, was at preparation stage of motivation.

Behavioural Observation

Patient had positive attitude towards the examiner and the assessment procedure. He was cooperative throughout, faced no problem in understanding and responding to the test items. He was comfortable and was curious to know the results.

Assessment

A primary clinical interview by the psychiatrist was conducted to confirm the diagnosis of opioid dependence syndrome as perICD-10 (Code F11.2) (DCR) and to evaluate the presence of other psychiatric disorders to support the reliability of assessment procedures and intervention. Before starting the therapeutic intervention, the baseline assessment was done using valid and reliable tools- Severity of dependence scale (SDS)(Gossop et al.,1995), Brief-Cope Questionnaire(Valvano & Stepleman, 2013), Emotional Regulation Questionnaire

(ERQ)(Gross & John, 2003) and Interpersonal Competence Questionaaire-15 (ICQ-15) (Coroiu et al, 2015). Pre and post score intervention was done to check for effectiveness of DBT for opioid dependence. Mental status examination and behavioral assessment was done by the therapist.

Detailed Therapy process:

Detailed DBT sessions that were planned are mentioned in Table 1. The duration of each session was for 90 minutes. The sessions were conducted twice in a week by the therapist along with TAU.

TAU: (Treatment as usual)

- Consist of oral opioid substitution therapy (OST) which consists of following medicines list, given in combination and after diagnosing general health conditions of the patient –
 - Tramadol- (25 mg oral dose every morning initially; increase by 25-50 mg/day every 3 days up to 50-100 mg orally every 4-6hr as needed; not to exceed 400 mg/day)
 - 2. Tapentadol- (50-250 mg orally every12hr; not to exceed 500 mg/day)
 - 3. Buprenorphine- (8 mg sublingually (SL) on day 1, then 16 mg SL on day 2; continued over 3-4 days)
 - Benzodiazepine- (5 to 25 mg three times a day-four times a day, Maximum 40 mg/day)
 - Clonidine- (oral dose is 0.3–1.3 mg day up to 10-14 days, The maximum oral dose is 2.4 mg daily)
- Intravenous drip (IV), it consists of DNS (dextrose and sodium chloride) for electrolyte correction and prevents dehydration caused due to absence of opioids.
- Two random weekly urine toxicology screening tests.

Table 1: Sequence of sessions for DBT (DBT skill training manual)

GOALS (number of sessions)	ACTIVITIES
Pre-intervention session – 1	Case history taking
	Rapport formation

Pre-intervention session – 2	Rapport formation
	• Psycho-education
	• Pre therapy assessment
Skill training for mindfulness (3)	Body scanning
	• Deep breathing exercises
Skill training for Distress Tolerance	Distracting: Wise Mind Accepts
(4-6)	• Improve the moment
Skill Training for Emotion	• Teaching emotional regulation
Regulation(7-9)	through
	• Ways to observe and describe the
	emotions
	• Letting go of emotional vulnerability
Skill training for Interpersonal	Interpersonal Effectiveness-
Effectiveness (10-12)	DEAR MAN
	• FAST
Termination Session (13)	• Termination of the therapy*

*Termination phase included- the summarizing previous sessions, reviewing the progress (Post assessment) and feedback from the patient.

After structuring details for DBT intervention, AB was asked to commit 8 weeks of therapy. This provided sufficient time to work on behaviors and skills deficits often seen with addiction patients. He was expected to attend 90-min individual sessions which were directed by a clinical psychologist with years of training and experience in DBT. AB could contact the therapist in between sessions via phone. His general physical health was reported fair and shorn of any chronic health conditions. The whole package, activities and procedures were chosen from skill repertories of DBT skill training manual (Linehan, 1995). Best efforts were made to keep AB engaged and enhance his capabilities.

The first module was mindfulness which was introduced to help AB be in control of his mind, instead of letting his mind be in control of him. The content (BODY SCAN and DEEP BREATHING EXERCISES) was reviewed every time at the beginning of other three

modules. Mindfulness skills helped him be calm, uplift his mood, be attentive and nonjudgmental towards external stimuli.

Second module Distress tolerance included skills - Distraction techniques (WISE MIND ACCEPTS) to help understand that pain both (physical and emotional) and distress are part of life, they cannot be eliminated or avoided but can be skillfully dealt. As mentioned above, his one of the chief complaint was difficulty controlling and managing urges, he repeatedly relied on (IMPROVE THE MOMENT) skill to self – sooth himself and change his behavioral response to craving and urges to consume substance.

Third module, Emotional regulation was introduced to help AB recognize, describe and name the emotion by practicing to label his emotions in terms of thought, body responses and body language. The intent was to help him let go of his emotional vulnerabilities (Guilt) by maintaining healthy life style which in turn foster his emotional well-being.

The fourth module Interpersonal competence include effective strategies (DEAR MAN) for asking what one needs, saying No and coping with interpersonal conflict (with his wife). Specific DBT technique (FAST) was used and practiced to enhance self-respect and increase sense of mastery.

Discussion

Supervision and support from the therapists was a critical component that contributed to the success of this case. The therapist acknowledged feelings of guilt and frustration as fluctuations in the patients' functioning and substance use. The sessions were methodically planned to achieve the set goals with appropriate techniques. The skills were taught by therapist using methods like- charts, diagrams, and role play. Initially, at the start of intervention AB's smoking increased (more than 15 cigarettes per day); however, toward later in therapy he consciously cut down to 7-8 in a day. AB actively participated in the mindfulness module as it would calm his impulses, ease his mood, helped him increase his focus and attention. Though it was difficult but he was determined to learn about controlling and managing his urge to consume smack, with constant practice he applied them in various stress provoking situations. His scores improved from 62 to 84 on (brief cope questionnaire) which marked his improved tolerance and better coping. AB showed significant reduction in opium intake on SDS (severity of dependence scale) from 14 to 10. Similar results have been

replicated in implementation of DBT-ST as stand-alone intervention for individuals with AUD(Cavicchioli et al., 2019)(Maffei et al, 2018)

Often time's deregulated emotions will serve as a barrier to effective actions. Patients possess the ability to act effectively, but their emotions render them unable to do or say what they want. It took great deal of time For AB to understand the dialectics of emotions in everyday life. During sessions for emotion regulation module, He often discussed about the guilt that has been eating him from inside and because which he feels extremely shameful to talk to his wife or even his parents. At this time he showed increased likelihood to use substances rather than skills because he was feeling more guilty and sad instead of feeling better. In response to this challenge, it was helpful to discuss the dialectic of acceptance versus change. This module provided him wide array of skills that helped him to identify and reduce the vulnerability to extreme emotions, as well as change the distressing ones. He realized that by using skills rather than substances, he tends to feel better in the long term. Accordingly, several empirical studies showed that negative mood and emotions are the most prominent factors determining craving and relapses(Gamble et al., 2010) (Sinha, 2017). Furthermore Deregulated emotional regulation (DER) predicts the level of substance dependence (Cavicchioli et al., 2019). Therefore, the decrease in DER during the DBT-ST might impact on several clinical features characterizing Substance use disorders. AB's score on ERQ(emotion regulation questionnaire) the cognitive reappraisal subscale showed improvement of 4 points as he was now better at understanding and interpreting the intense emotion provoking situation and responding accordingly. There was reduction on Emotional suppression subscale reflects that, AB towards later part of intervention got comfortable in expressing and acknowledging his suppressed emotions. He mentioned he always felt the need to fit in or get validated by people around him. Similar results were shown in a study where in measurable improvement were seen in emotion regulation in women with substance dependence and BPD that received DBT treatment (Axelrod et al., 2010).

Relationships can become strained under the weight of addiction as the person finds taking drugs as a priority above everything else. Dialectical behavior therapy uses Zen teachings to show the recovering addict how every decision they make, no matter how small, helps create their total self. Interpersonal competence skill training was one of the key reasons for AB to seek intervention in order to sort things with his wife and get rid of guilt. He learned that respecting and forgiving oneself is the first step to form and sustain healthy relationships with others. DBT is postulated to help patients interact with others in ways that allow them to

improve relationships while simultaneously maintaining their own personal values, selfrespect and wellbeing (Choudhary & Thapa, 2011). He showed significant improvement on all 5 subscales of interpersonal competence questionnaire (initiation, negative assertion, and providing emotional support, disclosure about self and managing conflict). He started communicating and explaining his wife and his parents as to how he got stuck and never realized it. He was more honest and apologetic towards the later part of module. Throughout the course of therapy, AB completed weekly assessments of overall functioning along with the random urine tests. He executed practical implication of skills in increasingly difficult contexts, also maintained abstinence.

Further studies including genders, larger sample size, controlled socio- economic and demographic conditions are suggested while making assessment and follow ups.

CONCLUSION

In the present case report, there was a significant reduction in opioid dependence level, increasing Distress tolerance skills, better emotional regulation and interpersonal relationships with the help of DBT. It was evident from the improvement in his pre and post therapy scores. Thus it can be concluded that DBT offers the structure, strength, and compassion needed to enhance overall functioning and quality of life. It seems that DBT skill training given along with pharmacotherapy increase the effectiveness of treatment with regard to substance dependence problem.

Author's Contribution

KS: Main author of research including planning, intervention and analysis; NKPS: Guidance in design, objectives, analysis and discussion as well as final presentation. NKPS is the guarantor for this paper.

Compliance with Ethical Standards

Conflict of Interest- nil Financial support – nil

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