Pharmaceutical Therapy for Addiction

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Drug addiction is a chronic disease associated with uncontrollable or compulsive, drug seeking and its use notwithstanding the harmful changes and consequences in the brain which are often long lasting (National Institute of Drug Abuse, 2016). The changes in the brain result in harmful behaviors regularly encountered by individuals who use drugs. Despite this, drug addiction can be identified as a relapsing disease, the return to drug use after previous attempt to stop (Volkow & Li, 2004). The path to drug addiction commences with voluntary habits to indulge in drug use. However, with time, the person’s ability to choose not to use a particular drug becomes compromised. Seeking and consuming the drug becomes the norm of the day. This act is intensified by the long-lasting effects of drug exposure on brain function. Addiction affects parts of the brain partaking crucial necessities including learning and memory, reward and motivation, and control over norms. Despite the fact that drug addiction is a widely known disease, it still exists as one of the complex areas of mental health. Addiction has proven difficult to treat with the existence of controversy on the best treatment approaches. Addiction is a chronic disease; thus individuals cannot quit drug use for a few days and get cured. Most patients need repeated care or long-term treatment to stop drug usage completely and normalize their lives (National Institute of Drug Abuse, 2016).

**Principles For Effective Treatment**

Scientific research on drug addiction intensifies the capacity to ascertain the best approaches towards addiction treatment. Significantly addiction has been identified as a complex but treatable condition that affects brain function. Despite this, no single treatment approach has been acknowledging to bring a positive effect on everyone. Individuals need to have quick access to treatment that addresses their needs not just his/her drug use situation. Behavioral therapies and counseling have often been used as the conventional treatment approaches. On the other hand, medication treatment has proved to be an important aspect of the course of treatment, especially when used in conjunction with the behavioral therapies (National Institute on Drug Abuse, 2016). However, its effectiveness is enhanced by long-term treatment care. In contrast, the treatment plan must be reviewed occasionally and modified to meet the changing needs of the patient. Medical assisted detoxification functions as the first stage of treatment (National Institute on Drug Abuse, 2016). The effectiveness of drug treatment does not depend on of voluntary norms. Thus its use during the treatment plan must regularly be monitored to intensify compliance.

**Addiction Treatment**

Research studies conducted on addiction have classified the programs into several modalities. The individual programs and treatment approaches evolve continuously to fit the patient’s needs. Most successful treatment approaches have been categorized into detoxification, behavioral counseling, medication, and evaluation and treatment for concurrent mental health issues for instance anxiety and depression (Unknown author, 2016).

Medically managed withdrawal and detoxification are often considered as the first stage of addiction treatment. Detoxification is identified as the process through which the patient’s body clears itself off drugs thus designed to manage the acute and psychological effects emanating from the stoppage. However, detoxification cannot solely address the social, psychological and behavioral problems encountered by the patient thus do not provide long lasting desirable changes for recovery. Often, detoxification is accompanied by unpleasant and possibly fatal side effects that stem from withdrawal acknowledged as the withdrawal symptoms. The withdrawal symptoms can be managed by medications prescribed by a physician in an outpatient or inpatient setting. Different medications are administered to assist in the management of the symptoms while withdrawing from opioids, nicotine, alcohol, benzodiazepines and other sedatives (Cami & Farré, 2003). The medications administered as management of the withdrawal symptoms treat co-curing conditions and prevent lapses.

Detoxification is not treatment but rather a first step in the treatment process. Often, patients who do not receive medication treatment after detoxification fall back to their old acts of drug abuse. Thus, the medications act as a crucial aspect of managing the withdrawal symptoms. Significantly, the detoxification process is enhanced with the provision of medication. To help re-lapse prevention, medications can be used to reestablish the normal brain functions thus decrease cravings (Van Skike etal, 2016). People using more than one drug need the treatment medications for the different substances they abused. Medication for the treatment of Opioids (prescription pain relievers, heroin) includes Methadone, buprenorphine, and naltrexone. Acting on the same targets in the brain similarly to morphine and heroin, Methadone and buprenorphine suppress the withdrawal symptoms and bring a halt to the cravings. The provided medications seek to help the patients reduce drug seeking and undesirable behaviors making them open to undergoing behavioral therapies (National Institute of Drug Abuse, 2016).

Understanding the clinical pharmacology of nicotine is crucial as it provide a basis for its prevention and treatment of addiction (Benowitz, 2008). Nicotine treatment therapies have different forms including gum, spray, the patch, and lozenges. These medications are readily accessible and can be bought over the counter. Despite this, the United States food and drug administration (FDA) has proved additional medications for nicotine addiction including varenicline and bupropion (Jasinski, Pevnick & Griffith, 1978). Both drugs have different action mechanism in the patient’s brain but work towards eliminating relapse amongst the individuals who are trying to quit smoking (Jasinski, Pevnick & Griffith, 1978). However, the effectiveness of the drugs is intensified when combined with behavioral treatment such as individual and group therapies.

FDA has approved three medications to facilitate the treatment of alcohol addiction. Additionally, a fourth drug, topiramate has depicted promise in the clinical trials that have been used with scores of people. The Naltrexone drug blocks opioid receptors within the brain that are involved in rewarding the effects of alcohol spree and craving for an alcoholic drink (National Institute on Drug Abuse, 2016). The drug is renowned for its ability to reduce relapse amongst the heavy drinkers as it has proved to be highly effective in many patients seeking to treat alcohol addiction. Acamprosate (Campral) is approved by FDA and functions as a drug with the ability to reduce the long-lasting symptoms of alcohol withdrawal including anxiety, insomnia, dysphoria (feeling unhappy or unwell) and restlessness. The drug is widely known for its ability to heighten withdrawal on heavy drinkers. Over the years, Acamprosate has been used on heavy drinkers who aim at fighting addiction. The third drug, Disulfiram (Antabuse), is known for its ability to interfere with alcohol breakdown (McGregor & Bowen, 2012). Upon its consumption, Acetaldehyde builds up in the body that often results in unpleasant reactions for instance nausea under the circumstances that the patient consumes alcohol (Yahyavi-Firouz-Abadi & See, 2009). Compliance, which is using the drugs according to its prescription, can be a problem. However, based on its action, the drug is highly effective for use amongst drinkers who are willing and motivated to quit drinking.

Cocaine addiction has existed as a persistent problem in the United States. According to the Office of National Drug Control Policy, approximately 3 million people in the United States are addicted to cocaine use. However, the situation is worsened by the fact that years of research has failed to develop a drug that can be used in treating its addiction. Despite this, drug inhibitors, for instance, Disulfiram can be used in its treatment. Presumably, Disulfiram is used in the treatment of alcohol addiction by inhibiting the aldehyde dehydrogenase enzyme that results in increased plasma levels, thus upon drinking, an aversive byproduct of alcohol metabolism is generated (Haile, Kosten, & Kosten, 2009). According to studies, Disulfiram depicts positive results on its use amongst cocaine addicts. Disulfiram has been acknowledged to reduce self-reporting cocaine use whereby urine of previous addicts show positive results based on its reduction in use (Olive etal, 2012). Co-curing conditions are also treated with the use of medications. The medications have been provided to treat the existing health conditions including anxiety and depression as they have been identified to be a significant factor contributing to drug addiction.

**Conclusion**

Drug addiction is a chronic disease often encountered with the modern society. Despite the fact that drug use starts with voluntary consumption, its treatment is complicated thus requiring compliance and long-term management for the prevention of relapse. Behavioral therapies and counseling function as an integral part of the treatment of addiction. However, their effectiveness depends on the use of medications as it heightens withdrawal irrespective of the patient’s voluntary response. Medications provide an integral part in drug treatment based on their capacity to remove undesirable symptoms emanating from a stop on drug use, the withdrawal symptoms.

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