

## UPROOT ADDICTION WITH EFFECTIVE AYURVEDIC MODALITIES

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### ABSTRACT

Addiction is currently defined as a behavior over which an individual has impaired control with harmful consequences. A survey conducted in 2013 reported that, 86.8 % of people ages 18 or older reported that they drank alcohol at some point in their lifetime and 24.6 % of them are engaged in binge drinking in the past month. Alcohol misuse is the fifth leading risk factor contributing to premature death and disability among the global population between ages of 15 and 49. In 2012, 3.3 million deaths (7.6% for men and 4.0% for women), were attributed to alcohol consumption. Besides alcohol leads to more than 200 diseases and injury-related health conditions primarily alcohol

dependence, liver cirrhosis, cancers, and injuries. Clinical study has shown that an agent that blocks the actions of opioid receptors reduces the alcohol consumption and relapse rates. The conventional drugs used for the treatment of addiction are naltrexone, Acamprosate and desulfuram. But these drugs are also having some adverse effects. Considering the total concept of addiction (*madatyay*), various Ayurvedic modalities can be helpful for de-addiction program.

**KEYWORDS:** Alcohol Addiction, Mdatyay, Treatment.

### INTRODUCTION

The state of being enslaved to a habit or practice or something that is psychological or physically habit forming called addiction. In 2012 global prevalence rates of disorders due to consumption alcohol among adults were estimated to range from 0% to 16 % and 5.9% of all global deaths were attribute to alcohol consumption.<sup>[1]</sup> World Health Organization (WHO) reported that worldwide 3.3 million people died due to alcohol addiction in 2012-13 and 11% of the population in India indulged in heavy drinking in 2014.<sup>[2]</sup> Effects of alcohol addiction

have negative impact upon marriage life, family life, education, employment, health and wellbeing, personality, financial issues, law and order.<sup>[3]</sup>

Some brain chemicals mediating alcohol's pleasurable and reinforcing effects viz. Naltrexone, Acamprosate are frequently used for the treatment of addiction especially on withdrawal symptoms.<sup>[4]</sup> Naltrexone is a widely accepted drug in the medical practice whereas Acamprosate is used in most European countries to prevent craving and relapse.<sup>[5]</sup> But these drugs are also having some adverse effect viz anxiety, nervousness, restlessness, trouble sleeping, etc.<sup>[3]</sup>

Ayurveda, the age old science may contribute to offer an adjuvant treatment modality for De-addiction. Some ayurvedic modalities like administration of specially prepared *Madya* in accordance with type of *madatyaya* and its administration method, administration of medicated milk, etc. may prove effective regimen for the treatment of de-addiction. Present article is aimed to explore all the possible treatment modalities from the treasure of Ayurved texts which may be used for de-addiction.

## METHOD

Data has been collected from data bases like Goggle Scholar, Pub Med, Embase during the period of July 2016- nov-2016 whereas Ayurvedic literature has been referred from the basic Ayurvedic classics and modern literature has been referred from the basic modern classics.

## RESULTS

Addiction is currently defined as a behavior over which an individual has impaired control with harmful consequences.<sup>[6]</sup>

The behavior characterizes in humans and criteria for diagnosing alcoholism outlined by American psychiatric association 1994 and are published in Diagnostic and Statistical Manual of Mental disorders 4th edition (DSM-IV). It includes:

1. Tolerance, the need for increased amount of alcohol to obtain the desired effects.
2. Withdrawal symptoms after discontinuation of alcohol use.
3. Taking alcohol large amounts over periods longer than initially intended.
4. Persistent desire or unsuccessful efforts to decrease alcohol use.
5. Spending a great deal of time acquiring alcohol.
6. Reducing important social and occupational activities because of alcohol use.

7. Continued use despite recurrent physical or psychological problems associated with alcohol use.

A survey conducted in 2013 reported that 86.8 % of people ages 18 or older reported that they drank alcohol at some point in their lifetime and 24.6 % of them are engaged in binge drinking in the past month.<sup>[7]</sup>

Alcohol misuse is the fifth leading risk factor contributing to premature death and disability among the global population between ages of 15 and 49.<sup>[8]</sup> In 2012, 3.3 million deaths (7.6 % for men and 4.0 % for women), were attributed to alcohol consumption.<sup>[1]</sup> Besides alcohol leads to more than 200 diseases and injury-related health conditions primarily alcohol dependence, liver cirrhosis, cancers, and injuries.<sup>[9]</sup> A clinical study has shown that an agent that blocks the actions of opioid receptors reduces the alcohol consumption and relapse rates.<sup>[10]</sup>

The conventional drugs used for the treatment of addiction are naltrexone, desulfiram and Acamprosate.

Naltrexone is a medication that alters normal function in the brain and body by blocking access to sites called opioid receptors, which appear on the exterior surfaces of certain nerve cells. Originally developed to combat the addictive effects of opioid narcotics such as heroin, oxycodone, and codeine, it is now also used to reduce the pleasurable sensations associated with drinking alcohol and reduce alcohol cravings in recovering alcoholics. The success of naltrexone treatment depends largely on simultaneous use of some sort of psychosocial therapy that can address specific issues surrounding alcohol use in any given individual.<sup>[11]</sup> Naltrexone a brain chemical acts on opiate receptors and neurotransmitters by interacting with docking molecules on the surfaces of certain nerve cells. But chronic naltrexone administration permanently blocks the opiate receptors. Body produces more opioid receptors to compensate this blockade and maintains its normal level of opioid activity, rendering the endogenous opioid system more sensitive to alcohol's effect and enhances alcohol preference. To maintain the effect of Naltrexone needs to administer with low dose and frequency that prevents Naltrexone accumulation otherwise Naltrexone dependence may be developed.<sup>[4]</sup>

Acamprosate has been used in most European countries to prevent craving and relapse. It interacts with several receptors and is modulator of the N-methyl D-aspartate receptor (NMDA) receptor.<sup>[5]</sup> Nervous system side effects have frequently included anxiety/nervousness (6%), dizziness (3%), insomnia (7%), paresthesia (2%), somnolence, decreased libido, amnesia, abnormal thinking and tremor. Convulsions, migraine, confusion, increased libido, vertigo, withdrawal syndrome, apathy, neuralgia and hypesthesia have also been reported. Alcohol craving, hyperkinesia, twitching, torticollis and encephalopathy have been reported. Alcohol dehydrogenase (ADH) forming acetaldehyde; this is removed from the body primarily by oxidation into acetate by acetaldehyde dehydrogenase (ALDH).<sup>[12]</sup>

Disulfiram is closely related to dipentamethylthiuram disulphide, an accelerator responsible for a high proportion of cases of rubber dermatitis. The associate's adverse reaction with Disulfiram is a widespread skin rash which takes long time to heal.<sup>[13]</sup>

In conventional health system the agents used for deaddiction are effective but also associated with potent adverse effects.

In ayurvedic classics excessive and improper consumption of ethanol may be correlated with '*Madatyay or Panatyay janita vikar*'. Although appropriate consumption of alcohol (*Madya*) has been accepted by Ayurveda, it has also been quoted that excessive (*Atipan*) and improper (*Vidinishidha*) consumption of alcohol leads to hazardous health effect.<sup>[14],[15]</sup>

The pathophysiology of *Madatyay* described in classics as 'Alcohol possess ten attributes which are opposite to the attributes of *Ojas*(vitality of body). Consumed alcohol enters the vital organs (*Hruday*) and with its attributes vitiates the *Ojas* leading to the irritation of mind (*sankshobhya chetasam*) rendering psychological disorders (*manas vikriyam*).<sup>13</sup> Few other references have been quoted in classics indicates robust relationship between alcohol intake and its ill effect on mind.<sup>[16],[17]</sup>

The ill effects caused by extensive alcohol ingestion are Craving (*Moha*), Anxiety (*Bhaya*), Depression (*Shoka*), Agitation (*Krodha*), Psychological disorder (*Unmad, Apsmara, Aptanaka*) etc.<sup>[18]</sup> The above said symptoms are very similar to criteria of dependence described by American psychiatric association. Hence alcoholism may be correlated with the ill effect of excessive and improper consumption of alcohol.

**CONTEMPORARY TREATMENT:<sup>[19]</sup>**

According to contemporary health science the adopted treatment modality for de-addiction are,

- Detoxification- The detoxification program helps to break body's physical addiction to alcohol.
- Treatment of dependence- For dependence mainly medicine has been prescribed as
  - 1] desulfuram (200-400mg daily).
  - 2] Diazepam (20mg 6 hourly for withdrawal 5-7 days).
  - 3] Acamprosate (666mg 8 hourly reducing cravings) also and also some symptomatic treatment.
- Psychiatric treatment- Considering the individual personality the personal or group counseling is usually given. Support groups may be helpful in some cases.
- Treatment for the physical complications is also given as per the raised complications.

**AYURVEDIC TREATMENT****General treatment for Madatyaya**

Charaka has said that Alcohol overcome by its proper digestion and metabolism And after getting it *jirna*, alcohol which is wholesome should be given, (with addition of different *dravyas* according to *dosas*).<sup>[20]</sup>

Madhya with the attributes like *tikshna*, *ushna*, *amla*, and *vidahi*, affects the digestion of food leading to formation of *Annarasa* leading to *utkleda* and then *vidagdhatta* of *Annarasa*. This *Annarasa* may create the complications like *daha*, *jwara*, *trushna*, *murchha*, *bhrama*, and *madavsthas*.<sup>[21]</sup> To sub sites these symptoms, alcohol with *amla dravyas* has been prescribed. As per the Ayurvedic philosophy *Alma rasa* reacts with *kshara* to form *madhur* rasa. As per the contemporary knowledge *Kshara* are basic in nature having OH as negative radical and *amla rasa* is acidic in nature with hydrogen as a positive radical. Thus chemically due to neutralization the *amla rasa* of *Madya* converted into *madhur rasa*. This has opposite properties then *Madaya* that was taken.<sup>[22]</sup>

In the treatment of *Madatyaya* a special emphasis has been given on the *Dughdapan*. The *Madya* possess the attributes opposite to the *Ojas*. After the abstinence of alcohol and the employed treatment for *madatyaya* like *langhan*, *pachan*, the *kapha dosha* gets diminished,

and patient becomes weak along with the *ajodushti*. To overcome and cure this condition, milk which is having similar attributes to *Ojas* is administered in excessive quantity.<sup>[23]</sup>

Acharya Charak has maintained 10 *guna* of *ojas* that is *guru, shita, mrudu, shleshna, bahalo, madhura, sthira, prasanna, pichhila*, and *snigdha*.<sup>[24]</sup> *Madhya* is *laghu, ushna, tikshna, susma, amla, vyavai, ruksha, vikashi, vishad, aashuga*.<sup>[25]</sup> Thus, *Madhya* has exactly opposite properties to that of *ojas*. These *gunas* are similar to *visha guna* except *visha* has *avyakta rasa* and *Madhya* has *amla rasa*.<sup>[26]</sup> Milk with the *ajovrdhaka* attribute mitigates the effect of *Madhya* and enhances the *Ojas* which is the vitality of body.

Ayurveda classics have also mentioned psychotherapies like cheerfulness of the mind should be done.<sup>[27]</sup>

*Dhvanshaka* and *Vikshaya* may be correlated with the withdrawal symptoms of *madatyaya*.<sup>[28]</sup> Acharyas have mentioned *chikitsa* like *Basti, Ghritpana, Abhyanga, ubatan* using the medicines *vatanashak* along with the *vata nashak annapan* for the ailments of *Dhvanshaka* and *Vikshaya*.<sup>[29],[30]</sup>

## CONCLUSION

In the contemporary medical health science, a detailed description of pathway of alcohol action is identified. Few drugs have been discovered to treat addiction but these therapeutic drugs are having some adverse effect as well. Extensive review of ayurvedic literature revealed that many Ayurvedic concepts of treatment and formulation can be adopted for effective management of de-addiction.

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