

# Understanding of Alcohol Use Disorders in Ayurveda

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## ABSTRACT:

Alcohol use disorder is a medical condition affecting a person when he abnormally consumes alcohol continuously for several days or months and is characterized by inability to control the drinking habit. It also negative impact on social well being, academic growth, behavioral changes and also the personal growth. In Ayurveda the adverse effects of alcohol are well described in various contexts and the diseases related to alcohol are grouped under the broad heading *Madatyaya*. This article encompasses the different conditions related to alcohol use disorder from both ancient and allied sciences. To conclude, alcohol use disorder can be considered as one of the clinical manifestation of *Sannipataja madatyaya*. But we need more scientific researches for the validation of the same in this field.

**Keywords:** *Madatyaya*, Alcohol use disorder, *Atipanajanya trishna*, *madya*, alcohol dependence

## INTRODUCTION:

Alcohol related disorders can be classified broadly into two – Alcohol induced disorders and Alcohol use disorders. Alcohol induced disorders include the conditions like intoxication, withdrawal symptoms, alcohol induced mental disorders like anxiety, depression, psychotic disorders, sleep disorders, sexual dysfunctions, delirium and neurocognitive disorders. This section deals with alcohol use disorders which comprises of alcohol abuse and alcohol dependence syndrome. Alcohol use disorder (AUD) is a pattern of alcohol use that involves problem controlling one's drinking, being preoccupied with alcohol or continuing to use alcohol even when it causes problems. This disorder also involves having to drink more to get the same effect.

The essential feature of AUD is a cluster of cognitive, behavioral and physiological symptoms indicating that the individual continues using the alcohol despite significant alcohol related problems. This is one among the 10 classes of psychoactive drugs which are named as substance related and addictive disorders in DSM – V classification of mental disorders. In previous edition of DSM – IV classification, there was mentioning of two conditions namely Alcohol abuse and Alcohol dependence which have been clubbed together in this edition and named as Alcohol use disorder<sup>1</sup>.

An important characteristic of any substance use disorders is an underlying change in brain circuits that

may persist beyond detoxification, particularly in individuals with severe disorders. The behavioral effects of these brain changes may be exhibited in the repeated relapses and intense drug craving when the individuals are exposed to drug related stimuli. The diagnosis of AUD is based on a pathological pattern of behaviors related to use of alcohol.

### **Diagnostic features:**

AUD is defined by a cluster of behavioral and physical symptoms, which can include withdrawal, tolerance, and craving. Alcohol withdrawal is characterized by withdrawal symptoms that develop approximately 4-12 hours after the reduction of intake following prolonged, heavy alcohol ingestion. Because withdrawal from alcohol can be unpleasant and intense, individuals may continue to consume alcohol despite adverse consequences, often to avoid or to relieve withdrawal symptoms. Some withdrawal symptoms (e.g., sleep problems) can persist at lower intensities for months and can contribute to relapse. Once a pattern of repetitive and intense use develops, individuals with alcohol use disorder may devote substantial periods of time to obtaining and consuming alcoholic beverages.

Craving for alcohol is indicated by a strong desire to drink that makes it difficult to think of anything else and that often results in the onset of drinking. School and job performance may also suffer either from the aftereffects of drinking or from actual intoxication at school or on the job; child care or household responsibilities may be neglected; and alcohol-related absences may occur from school or work. The individual may use alcohol in physically hazardous circumstances (e.g., driving an automobile, swimming, operating machinery while intoxicated). Finally, individuals with an alcohol use disorder may continue to consume alcohol despite the knowledge that continued consumption poses significant physical (e.g., blackouts, liver disease), psychological (e.g., depression), social, or interpersonal problems (e.g., violent arguments with spouse while intoxicated, child abuse).

The following are the diagnostic criteria mentioned in DSM – V for AUD<sup>2</sup>:

A problematic pattern of alcohol use leading to clinically significant impairment or distress, as manifested by at least two of the following, occurring within a 12-month period:

1. Alcohol is often taken in larger amounts or over a longer period than was intended.
2. There is a persistent desire or unsuccessful efforts to cut down or control alcohol use.
3. A great deal of time is spent in activities necessary to obtain alcohol, use alcohol, or recover from its effects.
4. Craving, or a strong desire or urge to use alcohol.
5. Recurrent alcohol use resulting in a failure to fulfill major role obligations at work, school, or home.
6. Continued alcohol use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of alcohol.
7. Important social, occupational, or recreational activities are given up or reduced because of alcohol use.
8. Recurrent alcohol use in situations in which it is physically hazardous.
9. Alcohol use is continued despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by alcohol.
10. Tolerance, as defined by either of the following:
  - a. A need for markedly increased amounts of alcohol to achieve intoxication or desired effect.
  - b. A markedly diminished effect with continued use of the same amount of alcohol.
11. Withdrawal, as manifested by either of the following:

- a. The characteristic withdrawal syndrome for alcohol (presence of two or more symptoms developing within few hours to a few days after the cessation of alcohol use. These symptoms include autonomic hyperactivity like sweating, pulse rate greater than 100 bpm, increased hand tremor, insomnia, nausea or vomiting, psychomotor agitation, anxiety, generalized tonic clonic seizures and transient visual, tactile or auditory hallucinations or illusions<sup>3</sup>).
- b. Alcohol (or a closely related substance, such as a benzodiazepine) is taken to relieve or avoid withdrawal symptoms.

Among these 11 criteria, criteria 1 to 4 are indicative of impaired control use of alcohol. Criteria 5 to 7 are suggesting social impairment due to alcohol use. Criteria 8 and 9 are signifying the risky use of alcohol. Criteria 10 and 11 are termed as pharmacological criteria as these physical symptoms develop which need the pharmacological treatment at times for their subsiding<sup>4</sup>. Severity of AUD is mild, moderate or severe which depends on the number of criteria a person meets based on their symptoms i.e., mild AUD (2 – 3 criteria), moderate AUD (4 – 5 criteria) and severe (6 or more criteria).

## DISCUSSION:

When we glance into the descriptions mentioned in our classics we may not find all the features of AUD under one heading. But we can find plenty of references in so many contexts explaining the ill effects of improper intake of alcohol.

In the context of *Sadvritta*, Charaka mentions do's and don'ts wherein he clearly states that one should not have any inclination towards alcohol, gambling and prostitution. This indirectly indicates the social impact of the alcohol<sup>5</sup>.

In the context of *Agrya prakarana*, it is clearly mentioned that the improper intake of *Madya* leads to impairment in functioning of *dhee*, *dhriti* and *smriti*<sup>6</sup> which are collectively called as *prajna bhedas*. The impairment in these three factors is called as *prajnaparadha* and is the prime reason for various kinds of diseases.

**Buddhi (Dhee):** *Dhee* is the faculty, which helps to attain a clear knowledge. The *Buddhi* is the one, which keeps us in touch with the reality<sup>7</sup>. It helps to discriminate between *nitya* (eternal) and *anitya* (transient), *hita* (wholesome) and *ahita* (Unwholesome). So whenever there is derangement of *Buddhi*, the contact with the reality will be lost<sup>8</sup>. Thus the person who is dependent on alcohol may not be able to distinguish between the wholesomeness and unwholesomeness, good or bad for him and attracted by the alcohol, thinking it as a good habit and continue to drink further. In many ways also his *buddhi* will be affected while thinking the different aspects thereby affecting his decision making.

**Dhriti:** *Manas* is considered as very unstable and is always attracted by the various external objects (both healthy and unhealthy) as well as internal urges and emotions. The main cause for any mental illness is the deficient (*heena*), inappropriate (*mithya*) and excessive (*ati*) indulgence of *Manas* with its objects<sup>9</sup>. So, controlled activity of *Manas* leads to the mental health. *Acharya* says that, the factor responsible for having a control over *Manas* is *Dhriti*<sup>10</sup>. Thus, when *Dhriti* is affected by consuming alcohol in excess without following the rules and regulations, the orientation is likely to be affected in him.

**Smriti:** The *Smriti* is the one that helps to store the knowledge and to recall the stored one. *Drishṭa* (Seen), *shruta* (Heard) and *anubhoota* (Experienced) are the different means of *Smriti*<sup>11</sup>. When these three faculties are deranged or unsettled, the ability to recall, discriminate things and control *Manas* from unwholesome objects get impaired, i.e. the higher mental functions are altered. This is reflected in

the form of undesirable behavior. Even his memory process will also be hampered due to continuous usage of alcohol.

While explaining the *Triteeya mada*, Acharya Charaka narrates the social impact on such persons who are continuously consuming alcohol to get the required effect. The person who is alcoholic is condemned and censured by all persons and disliked by them. He becomes incapable of recognizing pleasing things and friends. In this stage of intoxication, he loses the very sense of distinction of rightful, happy and useful items from the wrong, miserable and harmful ones respectively. Therefore, no wise person will ever like to place himself in such a stage of intoxication. The affected person becomes inactive like a broken tree with his mind afflicted with intoxication morbidities and altered consciousness. Further, Charaka<sup>12</sup> says that in this stage, the person will not be able to fulfill his desire (*rati*) for what he has consumed alcohol. Chakrapani comments on *rati* in the context of importance of first *mada*<sup>13</sup> and says that *rati* means the extreme happiness for all the five sense organs. This seems to be the increased tolerance for alcohol wherein the person finds markedly diminished effect with continued use of the same amount of alcohol and goes for excess consumption in order to achieve the desired effect.

Further, Charaka says that when the person becomes *vyasani* by continuously taking alcohol to attain this stage in due course he suffers from the diseases which cause miseries (Chakrapani – *Madatyaya*). That is, when the tolerance gets increased the person slowly becomes dependent to alcohol.

While mentioning the adverse effects of alcohol Charaka claims that whatever the adverse effects mentioned that are true when unwholesome type of *Madya* is taken in excess quantity without observing the appropriate procedures. In this context, he uses several words which have direct or indirect link with dependency. Unwise people, ignorant of the serious ill effects of alcohol (*Mahadosham*) and serious nature of intoxication (*Mahagadam*), being impelled by *rajas* and *tamas*, consider indulgence in drinking of alcohol (*Madya prasangam*) as a source of happiness. Their minds get afflicted by the adverse effects of alcohol and become deprived of the *sattvika* qualities. These people, with a craving for intoxication (*Madyalalasa*), become blinded by alcohol (*Madandha*), and lose all happiness of life<sup>14</sup>.

When we go through the explanation of *Atipanjanya Trishna* by Bhela<sup>15</sup>, some features of AUD are clearly narrated. Bhela says when the person is continuously indulging in alcohol (*Madyavacharana*) that person develops severe *trishna* in due course wherein he desires to take alcohol only (*Panameva abhinandati*). As he drinks and yet again drinks further on and on, the *agni* and *vayu* dry up in the body and become speedily absorbed in the body just as in the case of water in sand. It is therefore, for a habitual drunkard as he continues to drink further day and night (*Ahoratramapi pibati*), his excessive thirst does never get satisfied. Here *Panameva abhinandati* and *Ahoratramapi pibati* indicate the craving for alcohol, salience of drink related and time involved in drink related activities.

In the context of *Dhvamsaka* and *Vikshaya*, it is told that these dreaded diseases manifest in a patient who has stopped alcohol previously, suddenly takes recourse to drinking alcohol in excess. These disorders are difficult to manage. This shows in those days also the relapse was there. In AUD the relapse rate is found to be very high and also the disease is difficult to manage if proper care is not taken. But the clinical features of both *Dhvamsaka* and *Vikshaya* do not match with the descriptions of alcohol use disorders.

When we look into the descriptions of *Sannipataja Madatyaya* most of the symptoms of AUD can be found. The presentations of various symptoms in *Sannipataja Madatyaya*<sup>16</sup> are as follows:

*Shareera dukkham* (Uncomfortable state of the body), *Balavat sammoha* (attraction towards alcohol), *Hridaya vyatha* (Uneasiness in the cardiac region or palpitation), *Aruchi* (Anorexia), *Pratata trishna* (Strong desire or dehydration), *Jvarah sheetoshna lakshana* (Fever having the characteristics of cold and heat), *Shirah parshvasthi sandheenam vidyuttulya cha vedana* (Severe pain in the head, sides of the chest, bones and joints), *Atibala jrimbha* (Severe yawning), *Sphuranam* (Fine tremors), *Vepanam* (Coarse tremors), *Shrama* (Fatigue), *Urovibandha* (Feeling of obstruction in the chest), *Kasa* (Cough), *Hikka* (Hiccup), *Shvasa* (Dyspnoea), *Prajagarah* (Insomnia), *Shareera kampa* (Trembling of the body), *Karna-akshi-mukharoga* (Diseases of ears, eyes and mouth), *Trikagraha* (Stiffness of sacro-iliac joint), *Chhardi*, *atisara* and *hrillasa* of *tridoshatmaka* nature, *Bhrama* (Giddiness), *Pralapa* (Delirium), *Roopanam ashastanam darshanam* (Visual hallucinations like the body is covered with grass, creepers, leaves and dust and afraid of birds as if they are colliding with his body) and *Vyakulanam ashastanam svapnanam darshanani* (Dreaming of terrifying and inauspicious objects).

These can be understood as follows:

*Shareera dukkham*<sup>17</sup> – This means uneasy, uncomfortable, unpleasant nature of the body. It may be suggesting that the person becomes uneasy at times or in places when alcohol is not available. It can be subjective need wherein the person feels need of alcohol and could not manage without it.

*Balavat sammoha*<sup>18</sup> – This means confusion, ignorance, unconsciousness, bewilderment. The afflicted person will be in a state of confusion or bewilderment due to which he may feel disoriented. This makes it difficult to pay attention or remember the things. *Balavat sammoha* can be even *indriya moha*, based on the similar sense which indicate the craving also. This suggests, the person will be attracted by the alcohol frequently. He tries to control drinking by making rules, like not taking it on weekdays or when he is alone, but often fails to do so. Moreover, if he starts once he finds difficult to control it. This clearly suggests inability to control use.

*Pratata trishna*<sup>19</sup> – This may be the excessive desire or strong craving for alcohol at times or in places when it is not available. It can be even severe thirst which occurs as a result of the dehydration due to vomiting, diarrhea or diaphoresis (withdrawal symptoms).

*Chhardi*, *Atisara* and *Hrillasa* of *Sannipataja Madatyaya*<sup>20</sup> may be occurring due to the Gastrointestinal upset of withdrawal state.

*Hridaya vyatha*<sup>21</sup> – may be agitation, palpitation, perturbation, uneasiness, anguish, fear, or may be pain in the chest produced as a result of gastrointestinal upset all these can be found in withdrawal state.

*Bhrama*<sup>22</sup> – giddiness, which may be due to the hypertension owing to excessive consumption of alcohol for prolonged period or due to the deficiency of essential nutrients in the body as a result of negligence in food intake.

*Pralapa*<sup>23</sup> or irrelevant talking may be the condition due to alcohol withdrawal delirium.

*Sphuranam*, *Vepanam*, *Shareera kampa*<sup>24</sup> – these are the various degrees of tremulousness caused as a result of the withdrawal from the alcohol. *Sphuranam* may be the fine tremors, *Vepanam* may be the coarse tremors and *Shareera kampa* may be the tremulousness of the whole body.

There are some symptoms, which have direct equivalent symptoms in AUD presented with withdrawal symptoms. They are – *Aruchi* (Anorexia), *Jvarah sheetoshna lakshana* (Fever having the characteristics of cold and heat or low grade fever), *Prajagarah* (Insomnia), *Roopanam ashastanam darshanam* (Visual hallucinations), *Shiroruja* (*Vataja panatyaya* – Headache), *Sveda* (*Pittaja panatyaya* – Diaphoresis).

There are some symptoms, which may get neither direct equivalent symptom of AUD nor any explanation. They are –



*Shirah parshvathi sandheenam vidyuttulya cha vedana* (pain similar to electric shock in the regions of head and joints), *Atibala jrimbha* (excessive yawning), *Shrama* (fatigue), *Urovibandha* (tightness in the chest), *Kasa* (cough), *Hikka* (hiccup), *Shvasa* (dyspnoea), *Karna-akshi-mukharoga* (diseases of ear, eye and mouth), *Trikagraha* (stiffness in the low back region), *Vyakulanam ashastanam svapnanam darshanani* (terrifying dreams).

There is no direct reference in *Sannipataja Madatyaya*, which resembles generalized tonic-clonic seizures that can be observed in withdrawal seizures. However, while explaining the diseases associated with heavy and prolonged consumption of alcohol, Charaka says that *Apasmara* is associated with adverse effects due to consumption of alcohol against rules and regulations. This can be considered as generalized tonic-clonic seizures of withdrawal. In Ayurveda, it is explained as a separate clinical condition *Apasmara*.

By these it is obvious that AUD state can be one of the clinical conditions of *Sannipataja Madatyaya*, but *Sannipataja Madatyaya* is not just AUD. The above symptoms are due to multiple systemic dysfunctions due to prolonged and excessive alcohol consumption against rules and regulations.

#### CONCLUSION:

AUD can be mild, moderate or severe based on the number of symptoms one experiences. We get the ample descriptions in our science dealing with the deleterious effects of adverse use of alcohol. This not only affects the health of the individual but also affects his social relationships, behavioral changes etc. Even though *Sannipataja madatyaya* has more symptoms which mimic with the symptoms of alcohol use disorders more scientific validation is required in this regard.

**CONFLICTS OF INTEREST:** Nil

**ACKNOWLEDGMENTS:** Nil

#### REFERENCES:

1. American Psychiatric Association; Diagnostic and Statistical Manual for Mental Disorders – fifth edition (DSM – V); Americal Psychiatric publishing, Washington DC, 2013; pg preface 13
2. American Psychiatric Association; Diagnostic and Statistical Manual for Mental Disorders – fifth edition (DSM – V); Americal Psychiatric publishing, Washington DC, 2013; pg 490-491
3. American Psychiatric Association; Diagnostic and Statistical Manual for Mental Disorders – fifth edition (DSM – V); Americal Psychiatric publishing, Washington DC, 2013; pg 499
4. American Psychiatric Association; Diagnostic and Statistical Manual for Mental Disorders – fifth edition (DSM – V); Americal Psychiatric publishing, Washington DC, 2013; pg 483-484
5. Charaka Samhita by Agnivesha, revised by Charaka and Dridhabala with Ayurveda deepika of Chakrapanidatta; edited by Vaidya Jadavaji Trikamji Acharya; Sutrasthana 8/25; Chaukhambha Sanskrit Sansthan, Varanasi; 4<sup>th</sup> edition, 1994; pg
6. Charaka Samhita by Agnivesha, revised by Charaka and Dridhabala with Ayurveda deepika of Chakrapanidatta; edited by Vaidya Jadavaji Trikamji Acharya; Sutrasthana 25/40; Chaukhambha Sanskrit Sansthan, Varanasi; 4<sup>th</sup> edition, 1994; pg 131-132
7. Charaka Samhita by Agnivesha, revised by Charaka and Dridhabala with Ayurveda deepika of Chakrapanidatta; edited by Vaidya Jadavaji Trikamji Acharya; Shareerasthana 1/100; Chaukhambha

- Sanskrit Sansthan, Varanasi; 4<sup>th</sup> edition, 1994; pg 297
8. Charaka Samhita by Agnivesha, revised by Charaka and Dridhabala with Ayurveda deepika of Chakrapanidatta; edited by Vaidya Jadavaji Trikamji Acharya; Shareerasthana 1/99; Chaukhambha Sanskrit Sansthan, Varanasi; 4<sup>th</sup> edition, 1994; pg 297
  9. Charaka Samhita by Agnivesha, revised by Charaka and Dridhabala with Ayurveda deepika of Chakrapanidatta; edited by Vaidya Jadavaji Trikamji Acharya; Sutrasthana 8/16; Chaukhambha Sanskrit Sansthan, Varanasi; 4<sup>th</sup> edition, 1994; pg 57
  10. Charaka Samhita by Agnivesha, revised by Charaka and Dridhabala with Ayurveda deepika of Chakrapanidatta; edited by Vaidya Jadavaji Trikamji Acharya; Shareerasthana 1/100; Chaukhambha Sanskrit Sansthan, Varanasi; 4<sup>th</sup> edition, 1994; pg 297
  11. Charaka Samhita by Agnivesha, revised by Charaka and Dridhabala with Ayurveda deepika of Chakrapanidatta; edited by Vaidya Jadavaji Trikamji Acharya; Shareerasthana 1/101; Chaukhambha Sanskrit Sansthan, Varanasi; 4<sup>th</sup> edition, 1994; pg 297
  12. Charaka Samhita by Agnivesha, revised by Charaka and Dridhabala with Ayurveda deepika of Chakrapanidatta; edited by Vaidya Jadavaji Trikamji Acharya; Chikitsasthana 24/49; Chaukhambha Sanskrit Sansthan, Varanasi; 4<sup>th</sup> edition, 1994; pg 584
  13. Charaka Samhita by Agnivesha, revised by Charaka and Dridhabala with Ayurveda deepika of Chakrapanidatta; edited by Vaidya Jadavaji Trikamji Acharya; Chikitsasthana 24/62-67; Chaukhambha Sanskrit Sansthan, Varanasi; 4<sup>th</sup> edition, 1994; pg 585
  14. Charaka Samhita by Agnivesha, revised by Charaka and Dridhabala with Ayurveda deepika of Chakrapanidatta; edited by Vaidya Jadavaji Trikamji Acharya; Chikitsasthana 24/55; Chaukhambha Sanskrit Sansthan, Varanasi; 4<sup>th</sup> edition, 1994; pg 585
  15. Krishnamurthy K.H. English translation on Bhela Samhita; edited by Sharma P.V.; Chikitsasthana 28/6-9; Chaukhambha Visvabharati, Varanasi; Reprint edition, 2021; pg 471
  16. Charaka Samhita by Agnivesha, revised by Charaka and Dridhabala with Ayurveda deepika of Chakrapanidatta; edited by Vaidya Jadavaji Trikamji Acharya; Chikitsasthana 24/101-106; Chaukhambha Sanskrit Sansthan, Varanasi; 4<sup>th</sup> edition, 1994; pg 587
  17. Niranjana S, Swapna Swayamprava. Understanding the Features of *Madatyaya* (Alcoholism). International Journal of Ayurveda and Pharma Research. 2017; 5(8): pg 95-99.