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A brief description of *Madatya* w.s.r to Alcohol poisoning -A Conceptual Study

Durga Lal Sharma,¹ Shri Ram Saini²

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1. Prof & HOD Agad Tantra department SBLD Ayurved Viswabharti, Sardarshar, Churu, Rajasthan
2. Assistant Professor Rog Nidan evam Vikriti Vigyana Department SBLD Ayurved Viswabharti, Sardarshar, Churu, Rajasthan

Corresponding Author:- Durga Lal Sharma Prof & HOD Agad Tantra department SBLD Ayurved Viswabharti, Sardarshar, Churu, Rajasthan Mail idschardurgalal67@gmail.com Phone no-8949355737

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ABSTRACT: -

Alcoholism is a global health and societal concern that is on the rise. The stomach absorbs approximately 20% of the alcohol consumed. The remaining 80% is absorbed primarily through the small intestine. The circulatory also transports alcohol to the liver, which eliminates it from the bloodstream through a process known as "metabolising," in which it is transformed to a harmless chemical. The liver can only digest so much at a time, thus the remainder circulates throughout the body. As a result, the strength of the effect on the body is proportional to the amount consumed. When the amount of alcohol in the blood exceeds a particular threshold, the respiratory (breathing) system slows significantly, and oxygen no longer reaches the brain, resulting in a coma or death. Ayurveda classifies acute alcoholism, chronic alcoholism, and alcohol withdrawal as *Madhya* (Alcohol), *Mada* Intoxication, *Madatya* (Alcoholism), and *Panapkaram*, respectively. Though Ayurveda addresses alcoholism, chronic toxicity, withdrawal, and treatment, the opinions and principles for diagnosis and treatment are fragmented and differ from book. An attempt is made to organise the existing Ayurvedic literature on *Madya* and treatment of *Madatya* in a way that is both easy to understand and rewarding in the realm of treatment.

Keywords-*Madya, Madatya, Alcoholism.*



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INTRODUCTION

Madya refers to the compounds that have an influence on the brain and mind following indigestion. The major alcohol ethanol (ethyl alcohol), which is the most common alcohol in alcoholic beverages, was previously referred to as alcohol.^[1] It is classified as a depressant of the central nervous system. Alcohol enters the bloodstream through small blood vessels in the stomach and small intestine walls. Within minutes of drinking alcohol, it moves from the stomach to the brain, where it swiftly takes effect and slows nerve cell activity.^[2] Alcoholism is described to in Ayurveda as *Madatyaya* (Alcoholism), and chronic toxicity of alcohol is divided into four parts: *Vataj, Pittaj, Kaphaj, and Tridoshaja madatyaya*. (Alcoholism) with its clinical manifestation in Ayurveda while in modern science it is described under the systemic toxicity of gastrointestinal tract, nervous system, cardiovascular system, hematological system and reproductive system. Although Ayurveda recognizes alcohol addiction, its chronic toxicity, withdrawal, and treatment, the opinions and principles of diagnosis and treatment are scattered and differ from book to

text. There is also needed to highlight some new problems along with its management which are not mentioned in Ayurveda.

AIMS AND OBJECTIVE

- Various Ayurvedic concepts related to alcoholism will be evaluated, discussed, and elaborated.
- To describe the therapeutic measures mentioned in Ayurvedic texts.

MATERIAL AND METHOD

A comprehensive literary analysis is carried out for this assessment. Charak, Sushruta, and Vagbhatta are used to analyze the content. Other Ayurvedic, modern texts, and research articles are also used as reference.

Conceptual Study

Madatyaya is made up of two terms: *Mada* - any exciting or intoxicating condition, and *Atyaya* any exhilarating or intoxicating situation. *Atyaya* is a Sanskrit word that means "suffering."^[3] As a result, *Madatyaya* refers to someone who is inebriated. Excess Madya drinking is the source of this euphoria. The harmful consequences of the *Dosha* vary depending on its involvement.^{[4],[5]}

Table no 1. Stages of Mada (Alcoholism) ^[6]

<i>Stages of mada</i>	LAKSHANAS	B.A.C ^[7]	BEHAVIORAL CORELATES	SROTAS INVOLVED
<i>PRATHAMA</i>	Happy, relaxed. Promotes good sleep.	25-100 mg%	Excitement	<i>Buddhivaha</i>
<i>DWITEEYA</i>	Impaired Speech, vision and thought process. Inappropriate activities.	100-200mg%	Excitement Confusion	<i>Manovaha</i> <i>Buddhivaha</i> <i>Cheshtavaha</i>
<i>TRITEEYA</i>	Lack of self-control.	200-300mg%	Slurred speech Confusion incoordination	<i>Sanjnavaha</i> (<i>Smrithi</i>) <i>chestavaha</i>
<i>CHATURTHA</i> (<i>Vangasena</i>)	Hypothermia Dysarthria Cold sweats Unconsciousness	>300mg%	Respiratory distress. Coma. Death.	<i>Sanjnavaha</i> <i>Chetanavaha</i>

Table no 2. Types of *Madatyā* [8]

TYPES	SIGNS AND SYMPTOMS
<i>PANAATYAYA</i>	<i>Sthambha, angamarda, hrudaya graha, thodha, kampa, shiroruja- Vata Dosha</i> <i>Sweda, pralapa, mukhashosha, daha, murcha- Pitta dosha</i> <i>Vamathu, seeta, kapha praseka- Kapha dosha</i> <i>Presence of all symptoms -Sannipata dosha</i>
<i>PARAMADA</i>	<i>Ushma, Angagurutha, virasanuntvam, Aruchi, Malamutra sangam,Trushna and Shiroruja, sandhibheda</i>
<i>PANAAJIRNA</i>	<i>Adhmana, sour vomiting, daha- during digestion – predominance of pitta.</i>
<i>PANA VIBHRAMA</i>	<i>Hrudgatrathoda, chardi, jwara, murcha, shiroruja, daha, Dvesha- towards sura and food.</i>

Table no 3. *Doshic Background of Madatyā* [9]

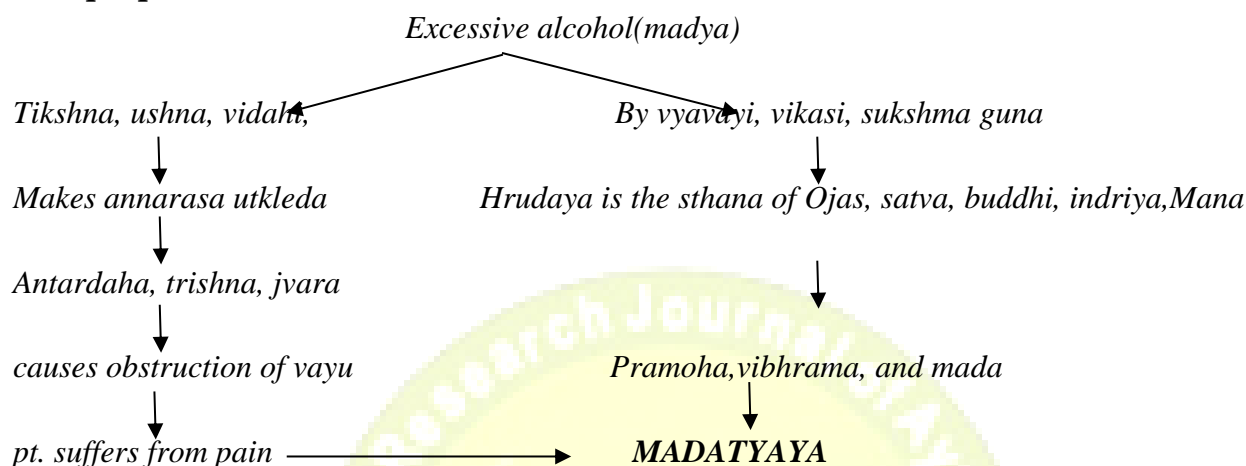
DOSHA	NIDANA	SIGNS AND SYMPTOMS
<i>VATAJA</i>	<i>Indulges in sthri, shoka,bhaya</i> <i>Heavy work, alcohol which is ruksha- leads to impairment of sleep.</i>	<i>Hikka, shwasa, kampa, parsva shula, prajagara, pralapa</i>
<i>PITTAJA</i>	<i>Food intake which is tikshna, ushna, having madya which is tikshna, amla</i>	<i>Trushna, daha, jwara, sweda,murcha, atisara, bhrama.</i>
<i>KAPHAJA</i>	<i>Intake of madhura, sneha, guda, not doing regular exercises, day sleep, consumes alcohol not properly fermented.</i>	<i>Chardhi, arochaka, hrillasa, tandra, heaviness and chills.</i>
<i>SANNIPATA</i>	<i>Mixed nidana of tridoshas, effect will be as of visha, but not as powerful as visha.</i>	<i>Mixed signs and symptoms, may cause death or leads to disease</i>

Samprapti Ghataka

- *Dosha- Tridoshaja*
- *Dhatu-Rasadidhatu, Especially Rasa, Rakta*

- *Manasika Dosha-Rajas And Tamas*
- *Srotas-Manovaha, Rasadi Sarva Srotas*
- *Satva-Avara*
- *Mula Sthana-Hridaya*

Samprapti



Contemporary View

Ethanol depresses the CNS by dissolving the lipid membrane of the cell and generating lipid matrix disorder (membrane fluidization).^[10] Ethanol works by boosting the function of the Gamma aminobutyric acid (GABA) receptor and the related chloride ion channel. Formic acid oxidation via the catalase–peroxidase system or tetrahydrofolate metabolism are both dependent on the carbon pool, which is catalysed by 10 formyl-tetrahydrofolate synthetase.^[11] Ethyl alcohol depresses the CNS irregularly in descending order from cortex to medulla. Stage of excitement is due to removal of inhibitions. Alcohol from the blood flows through the lungs and into the alveolar air, giving off an alcoholic odour. It promotes widespread vasodilation, is hypnotic, gives a warm feeling but causes increased heat loss, stimulates appetite, is diuretic, diaphoretic, and causes gastritis.^[12] Because the rate of oxidation of methyl alcohol is one-fifth that of ethanol, methanol and its metabolites,

formaldehyde and formic acid, accumulate in the brain and optic nerve.^[13] The approximate % of absolute alcohol in diverse beverages determines the mechanism of degree of extent of alcohol. Alcohol is a CNS depressant that works by blocking the receptor for -aminobutyric acid (GABA), the nervous system's main inhibitory neurotransmitter. At blood alcohol levels as low as 0.02-0.03 g/dl, behavioral, cognitive, and psychomotor alterations can occur.^[14]

Management of Madatyaya (Alcoholism) through Ayurveda

In the beginning, all varieties of *Madatyaya* are caused by the vitiation of all three *Doshas*, and the most predominant *Dosha* is treated. If all of the *Doshas* are equally inflamed, treatment begins with *Kapha*, then *Pitta*, and finally *Vata*.^[15] Ailments induced by consuming alcohol in an inappropriate manner, in excess quantity, or in insufficient quantity can be treated by consuming the same alcohol in the appropriate manner and quantity.

Following steps adopted for de-addiction treatment of drug addicted person

Clinical care is delivered in both outpatient and inpatient settings, and includes a number of procedures such as registration, consultation, evaluation, treatment planning, and counselling. A team of addiction experts assesses progress and makes personalized recommendations.

Practical approach of Management

Samanya Chikitsa (general management) and *Visistha Chikitsa* (specific treatment)

a. *Samanya Chikitsa*

a. *Doshanusara Chikitsa*- Because all varieties of alcoholism are *Tridoshaja*, the physician should treat the *Dosha* that is prominent in the patient first. Otherwise, because it is mostly flanked by *Pitta and Vata*, treatment for alcoholism should begin with *Kapha*.^[16]

b. **Administration of *Madhya (Madhya Prayoga)*** - If provided properly, disorders caused by insufficient, incorrect, or excessive alcohol use can be healed. *Vayu* is clogged in channels due to *Dosha* elicited by wine, which causes great agony in the head, bones, and joints, according to *Charaka*. In such cases for liquefying the *Dosha* particularly wine should be given because of its properties like quick absorption, sharpness and hotness unlike of other remedial measures. Wine clears blocked channels, carminates *vata*, enhances savour, promotes digestive fire, and becomes appropriate with experience. Pain and diseases are relieved when obstructions in channels are removed and *vata* is carminate.

c. **Administration of Milk (*Dugda Prayoga*)**- If the alcoholism does not improve with these tried-and-true remedies, it is recommended that milk be consumed instead of wine. When *Kapha* is reduced, debility and lightness arise as a result of lightening (*Langana, Pachana, Shodhana* procedures and *Shamana* measures), and *Vata* and *Pitta* predominate in the wine-affected patient, so milk administration acts as

a boon, similar to rains for a tree that is extremely dried in the summer.^[17]

d. Beyond seven or eight days, administer drugs to cure alcoholic intoxication; by this time, the wine that is residing in unusual (wrong) channels has been digested, and any diseases that persist after this time should be treated appropriately with drugs suitable for alcoholic intoxication.^[18]

Visistha Chikitsa

a. ***Vataja Madatyaya*** - *Chukra, Maricha, Ardraka, Dipya, and Kusta*, together with a pinch of *Sauvarchala*, should be consumed with *Madya, Prtvika, Dipyaka, Mahaushada, and Hingu*, as well as *Sauvarchala salt*. *Pana* should be served with *Amra Phala, Amrataka, Dadima, and Matulunga*. Alternatively, the patient can consume meat soup (*Mamsa Rasa*) mixed with *Matulunga Swarasa and Mamsa* of marshy animals, as well as *Sugandi Dravyas* (flavouring agents).^[19]

b. ***Pittaja Madatyaya*** - *Madhya* should be combined with *Kashaya* made with *Madura Rasa Dravyas, Madhu, and Sita*, and the wonderful flavours will benefit you. After drinking this *Madhya*, one should drink *Ikshu Rasa* and vomit it out fully. Then *Lava Mamsa Rasa, Aina, and Tittira, or Mudga Rasa, Sita, and Ghruta*, should be given to drink for good health.

c. ***Kaphaja Madatyaya*** - *Vamana* can be induced with the use of *Madhya, Bimbi, and Vidula Swarasa. Mamsa Rasa* of wild fatty animals with bitters and pungent flavours should be offered, as well as soups made with pulses.^[20]

d. ***Sannipataja Madatyaya*** - Due to all three *Dosas*, actions to counteract all of them should be performed; however, in the situation of dual *Dosas* participation, the principal one should be treated first once both have been assessed. In addition, all additional positive measures, including those that satisfy the mind, should be implemented.^[21]

DISCUSSION

Alcohol, when consumed in the right way, at the right time, with good food, in the right dose, and according to one's own strength, can be just as beneficial as Amrita. However, alcoholism in the present generation causes both mental and physical problems for the individual. As we have seen, alcohol is a highly addictive chemical that has a negative impact on critical body functions. Because 80 percent of alcohol is absorbed in the small intestine and much more is processed in the liver, it has a toxic effect on the liver and destroys it. In some circumstances, excessive alcohol use and long-term drinking might lead to malignant stages in several organs.^[22] It mostly affects a person's hepatic system, resulting in liver cirrhosis. Anorexia, loss of appetite, gastrointestinal pain, vomiting, constipation, and other GIT issues will result as a result. Counselling is one of the most important aspects of alcoholism treatment. The individual must be rationally consoled or convinced, and high levels of motivation must be maintained. Education about alcohol and its harmful effects on the body must be known to everyone, and family or friends must be introduced to cease protecting the person from the issues created by alcohol. *Madatyaya* exhibits clinical symptoms that are similar to alcoholism, according to Ayurvedic scriptures. The imbalance of *Dosha* and *Dushya* is the main cause of any ailment. It is essential to balance these components in order to treat any sickness. *Tridosha*, *Rasa*, and *Rakta* are *dushyas* in *Madatyaya*, as are *Rasavaha*, *Raktavaha*, and *Sangyavaha Shrotas*. *Hridaya* is the main *adhistan* that causes *Ojakshaya*, *Dhatukshaya*, *Sharirkampa*, *Pralapa*, *Bhrama*, *Agni Vikar*, and *Anidra* in people. So, a medicine with a *Tridosha shamak* effect and properties that promote *oja*, *bala*, and *dhatu*, as well as *deepana*, *pachana*, *anulomana*, *yakrita uttejak*, *mutral*,

raktavardhak, *raktashodhak*, *vishaghna*, *rasayan*, and *medhya* properties, can provide relief from signs and symptoms. Ayurveda's *Madatyaya* can be linked to the withdrawal symptoms of prolonged drinking to some extent.

CONCLUSION

As a result, it can be argued that *Madatyaya* (Alcohol Intoxication) is well-explained in Ayurvedic texts, which aids us in understanding the pathophysiology, diagnosis, and treatment of *madatyaya* based on the *Doshas'* involvement.

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