

A CRITICAL REVIEW ON MADATYAYA (ALCOHOLISM)

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ABSTRACT

Madya (Alcohol) and *Madatyaya* (Alcoholism) is not a new problem in *Ayurveda* and description found since *Vedic* literature. But its relation with Health and Social Problem are continuously increasing day by day. In *Ayurveda*, the varieties of disorders caused by the excessive and improper use of alcohol are well described and documented under one heading '*Madatyaya*' or '*Panatyaya*'. It is a *Saanipataja Vyadhi* (caused by vitiation of all three *Doshas* – *Vata*, *Pitta* and *Kapha*). It mainly vitiates *Ojas*, as *Madya* (alcohol) have opposite quality of *Ojas*. Alcohol is treated as poison (neurotoxic cerebral inebriant poison) when consume much more dose and as medicine in limited dose. In this contemporary era every disease is being understood by comparing it with modern parlance. Here is a small effort to understand the features of *Madatyaya* in terms of modern perspective. By understanding the features of *Madatyaya* we can say that *Madatyaya* is not just an alcohol intoxication, dependence or withdrawal state, but it is the condition where multiple systemic dysfunctions are involved from immediate and acute manifestations to chronic and severe manifestations. Neurological, gastro-hepatic and cardio-pulmonary manifestations are the commonest features seen in the patients of *Madatyaya* which is also similar to the descriptions of alcoholism.

Keywords: *Madya*, *Madatyaya*, *Oja*, *Panatyaya*, Chronic Alcoholism.

INTRODUCTION

Alcoholism is one of the serious social problems which is rapidly increasing in every year. The fastest growth is being observed in the developing countries of Asia more particularly in India. Drinking of alcohol makes the life of a man very miserable. Alcohol not only degrades the health of the person but also affects his family and society. The World Health Organization (WHO) has listed alcoholism as one of the three most deadly killer diseases of the 20th century¹. The abuse of alcohol results in 2.5 million

deaths per year. 32,000 young people between the age of 15 and 29 die out of alcohol related cause, thus resulting in 9% of all death in that age group. At least 20% of the patients in the mental health settings have alcohol dependent or alcohol related disorders, from both the genders and all the socioeconomic backgrounds². The disease '*Madatyaya*' described in *Ayurveda* encompasses various disorders resulting due to excessive and improper consumption of alcohol against rules. The description of

Madya (alcohol), its definition, types, indication as a medicine, merits and de-merits, disorder, disease and complication, treatment all are available widely in the ancient Indian system of medicine.

AIM AND OBJECTS

1. To evaluate, discuss and elaborate various *Ayurvedic* concepts related to Alcoholism.
2. To discuss *Ayurvedic* and modern pathophysiology of *Madatyaya* (Alcoholism)
3. To describe the therapeutic measures mentioned in *Ayurvedic* texts.

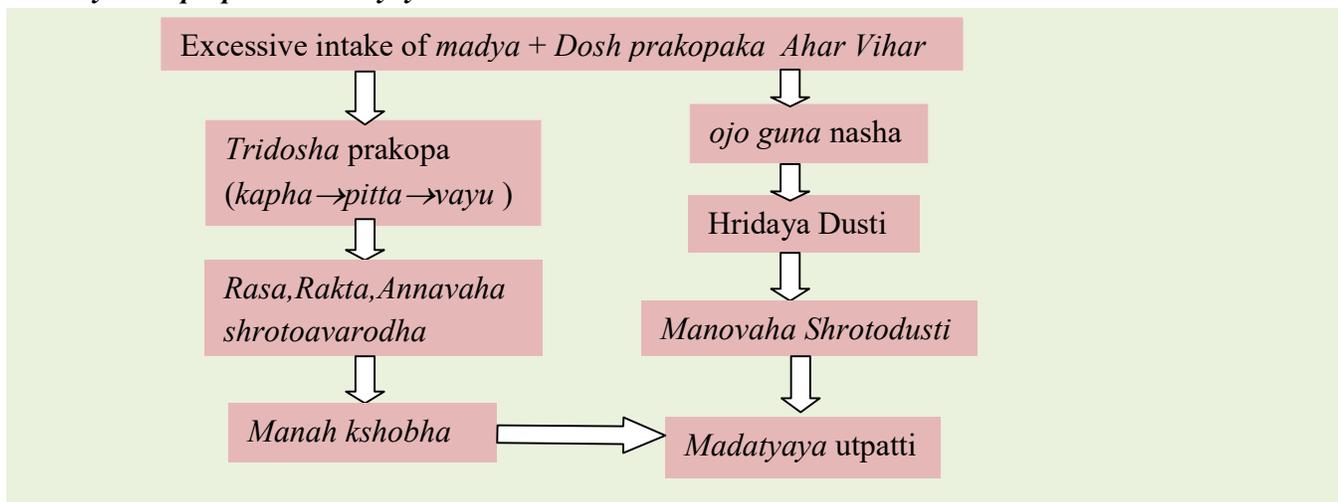
MATERIALS AND METHODS:

For the present review detailed literary study is performed. The content and references are analysed from available text. Principle texts referred are *Charak*, *Sushruta* and *Vagbhata*. Also relevant references are taken from other *Ayurvedic*, modern texts and research articles.

HISTORICAL REVIEW:

Madatyaya Nidan, *Lakshana* and *Chikitsa* is described in 24th chapter of *Charak Chikitsa Sthana* and in 47th chapter of *Sushrut Uttaratantra* i.e. *Panatyayaprathishedha*. In *Ashtanga Hridaya Madatyaya Nidana* is described in *Nidana Sthana* 6th chapter while *Chikitsa* of *Madatyaya* is described in *Chikitsa Sthana*, 7th chapter. In *Madhava Nidana*, *Madatyaya* is described after description of *Krimi Nidana*. In *Bhavaprakash*, *Madatyaya* is described in *Madhyama khanda* after description of *Murcha*, *Bhram*, *Nidra*, *Tandra* and *Sanyas Adhikarana* followed with some formulations along with treatment. *Sharangadhara* defines *madya* in *purva khanda* 4th chapter. In *Kashyapa Samhita*, *Madatyaya* is described in *Chikitsa Sthana* after chapter on *Krimi* in which ill effects of *Madya* and their treatment are described with special reference to pregnant woman and infants.

Samanya Samprapti Of Madatyaya^{3,4}



In Contemporary Science (According To Modern)

Mode of Action of Alcohol⁵ Ethanol depresses the CNS by dissolving in the cells lipid membrane and causing disorganization of the lipid matrix (membrane fluidization). Ethanol acts by enhancing gamma-

aminobutyric acid (GABA) function through interactions with GABA receptor and associated chloride ion channel. Metabolism of formic acid oxidation via the catalase-peroxidase system or metabolism by the tetrahydrofolic acid is dependant on-carbon pool

which is catalyzed by 10 formyl-tetrahydrofolate synthetase.

Mechanism of action Alcohol⁶ Ethyl alcohol depresses the CNS irregularly in descending order from cortex to medulla. Stage of excitement is due to removal of inhibitions. Alcohol from blood passes into alveolar air through lung; hence breathe smell of alcohol. It causes generalized vasodilatation, is hypnotic, creates a feeling of warmth but the heat loss is more, stimulates appetite, diuretic, diaphoretic and causes gastritis. Methyl alcohol rate of oxidation is

1/5 of that of ethanol and therefore, there is accumulation of methanol and its metabolites; formaldehyde and formic acid, which are very toxic to brain and optic nerve. Mechanism of degree of extent of alcohol depends upon the approximate percent of absolute alcohol in various beverages. Alcohol is CNS depressant that acts on receptor for γ -aminobutyric acid (GABA) the major inhibitory neurotransmitter in the nervous system. Behavioral, cognitive and psychomotor changes can occur at blood alcohol level as low as 0.02-0.03 g/dl.

CHARAKA

Table 1: Vataja Madatyaya -Features of *Vataja Madatyaya* can be understood as follows:

S.No.	Lakshan ⁷	Distinctive features ⁸	Correlated cause ⁹
1.	<i>Hikka</i>	hiccup	due to gastritis or other gastrointestinal problems leading to irritation of diaphragm
2.	<i>Shvaasa</i>	dyspnoea	decreased respiratory functions and infections
3.	<i>Shirah kampa</i>	Tremors in head	cerebellar degeneration
4.	<i>Parshvashoola</i>	Pain in sides	due to cardiac diseases or pancreatitis
5.	<i>Prajagara</i> and <i>Bahupralapa</i>	Vigil and frequent delirium	dearranged functions of nervous system and associated psychiatric conditions.

Table 2: Pittaja Madatyaya - Features of *Pittaja Madatyaya* can be understood as follows

S.No.	Lakshan ¹⁰	Distinctive features ¹¹	Correlated cause ¹²
1.	<i>Trishna</i>	Thirst	due to dehydration
2.	<i>Daha</i>	Burning sensation	peripheral neuropathy
3.	<i>Jvara, Sveda, Moorccha, Vibhrama</i>	Fever, Sweating Fainting, giddiness	due to hyperactivity of autonomous nervous system,
4.	<i>Atisara</i>	Diarrhoea	due to acute or chronic gastritis
5.	green coloration	Greenish complexion	due to liver dysfunction

Table 3: Kaphaja Madatyaya - Features of *Kaphaja Madatyaya* can be understood as follows

S.No.	Lakshan ¹³	Distinctive features ¹⁴	Correlated cause ¹⁵
1.	<i>Chhardi, Hrilasa</i>	Vomiting, nausea	due to autonomic hyperactivity,
2.	<i>Arochaka</i>	anorexia	erosion of gastrointestinal mucosa and decreased secretion of gastric juices,
3.	<i>Tandra, Staimitya, Gaurava</i> and <i>Sheetapareeta</i>	Drowsiness, stiffness heaviness, feeling of cold	May be due to cardiopulmonary dysfunctions.

Table 4: Sannipataja Madatyaya- The presentations of various symptoms in *Sannipataja Madatyaya* are as follows

S.No.	Lakshan ¹⁶	Distinctive features ¹⁷	Correlated cause ¹⁸
1.	<i>Shareera duhkham</i>	Physical distress	Due to unavailability of alcohol
2.	<i>Balavat sammoha</i>	Mental confusion	Attraction towards the alcohol frequently
3.	<i>Pratata trishna</i>	Continued thirst	excessive desire for alcohol, dehydration
4.	<i>Chhardi, Atisara and Hrillasa</i>	Vomiting, diarrhea, nausea	Gastrointestinal upset of withdrawal state.
5.	<i>Hridaya vyatha</i>	Cardiac pain	as a result of gastrointestinal upset and as a result of withdrawal state
6.	<i>Bhrama</i>	giddiness	Hypertension, and due to deficiency of essential nutrients in the body as a result of negligence in food intake.
7.	<i>Pralapa</i>	delirium	due to alcohol withdrawal
8.	<i>Sphuranam, Vepanam, Shareera kampa</i>	Twitching, tremor, trembling	Withdrawal symptoms
9.	<i>Kasa, Hikka and Shwasa</i>	Cough, hiccup dyspnoea	sudden rise of functions of autonomic nervous system
10.	<i>Aruchi - Jvarah sheetoshna</i>	Anorexia, fever characterized by cold and heat	As a result of alcohol Withdrawal symptoms
11.	<i>Prajagarah, Roopaanaamshataanaam darshanam, Sveda, Vyakulaanaamashastaanaam swapnaanaam darshanaani</i>	Insomnia, Visual hallucinations, Diaphoresis, dreaming of terrifying and inauspicious objects	neural excitation

SHUSRUT¹⁹

Panatyaya (acute intoxication due to excessive drinking) According to *Sushruta*, in *Panatyaya* caused by *vata*, there will be rigidity and mild pain in the body parts, catching pain in the region of heart, pricking pain, shivering and headache, in that produced by *pitta* there will be more sweating, irrelevant talk, dryness of the mouth, burning sensation, fainting and yellow colour of the face and eyes, in that caused by *kapha* there will be vomiting, feeling of cold and flow of *kapha* from the mouth in that produced by all the *doshas* together, there will be the presence of all symptoms.

Paramada (hangover) – symptoms of *paramada* are increased body temperature, feeling of heaviness of the body, bad taste in the mouth, increase of *kapha*, loss of taste, non-elimination of faeces and urine, thirst and pain in the head and joints.

Panajirna (alcoholic gastritis)- symptoms present are flatulence, vomiting of sour taste and burning sensation during digestion.

Panavibharama (chronic alcoholism)- pricking pain in the region of heart and body, vomiting, fever, feeling of smoke in the throat, fainting, more of salivation, headache, burning sensation, aversion to beer (wine) and food.

Vagbhata²⁰: *Vagbhata* explains 4 types of *Madatyaya* i.e. *Vataja*, *Pittaja*, *Kaphaja* and *Sannipataja*. Apart from this *Dhvamsaka* and *Viksaya* are also explained. The person who has discontinued drinking but start drinking again suddenly, in wrong manner or drinking a different variety becomes afflicted with *Dhvamsaka* and *Viksaya* due to increased *vata*, both are difficult to treat.

Dhvamsaka- there is expectoration of *kapha* (sputum), dryness of throat, excessive sleep, intolerance of noise and stupor.

Viksaya- manifests with severe pain in the body and head, obstruction in the heart (chest) and throat, severe delusion, cough, thirst, vomiting and fever.

CHIKITSA YOJANA

All types of *madatyaya* (alcoholism) are *tridoshaja*, hence the physician should first treat the *dosha* which is predominant. In alcoholism the treatment should be started with *kapha* because it is predominantly vitiated flanked by *pitta* and *vata*. The disorder, which is caused by faulty, excessive or deficient drinking, is pacified by wine itself taken in the proper quantity. After digestion of *ama* and demerits of wine and arising of appetite and lightness, the patient should be given the wine itself whatever is suitable to him. This should be cold added with *sauvarcala*, *bida* and rock salt along with *matulunga* and fresh ginger, mixed with water in proper quantity. When hot, sour and burning wine is taken in excessive quantity the exited chyle is burnt and acquires an alkaline character. This produces internal burning, fever, thirst, mental confusion, giddiness and narcosis. For pacifying this syndrome one should prescribe intake of wine itself. Alkali gets neutralised immediately in combination of acid, and wine is the best among the acidic substances²¹. **Vata**- Wine added with ginger, *ela*, *saindhav* and *hingu* should be given. Fruit juices of mango, *dadima* are recommended. **Pittaja**- *Vamana* with plenty of sugarcane juices, wine added with sweet and *kashaya* drugs, honey, sugar and *ela* are useful. *Seetala upachara* are indicated. *Mantha*, *mudga yusa* are recommended. **Kaphaja** – *Vamana*, *kaph ahara* diets, *ushna* and *ruksha ahara*, *vyayama*, *ruksha svedana*, *ushna jala snana* etc are recommended. **Tridoshaja**- mixed therapies are done according to predominance of *dosha*²². Chronic alcoholism leads to excessive accumulation of morbid *Dosha*, which need to be expelled out from nearest route by specific *Panchakarma*. Hence they may need careful usage of *Panchakarma*²³. *Rasayan* also are having potency and properties that directly acts on sign and symptoms of *madatyaya*²⁴.

DISCUSSION

Alcohol if taken in appropriate manner, time, with wholesome food, in optimum dose, according to own strength then it is as beneficial as *Amrita*. But modern generation addiction towards alcohol leads to mental as well as physical disturbance of individual. As we have seen that alcohol is very harmful addicted substance and deleterious effect on vital body part. Mostly 80 % percent alcohol absorbed in small intestine and much more metabolized in liver that's why it shows its toxic effect on liver and damages it. In some cases much more intake and long term drinking of alcohol leads to cancerous stage of various organs. It mainly affects the hepatic system of the person, which end up with cirrhosis of liver. This will give rise to many GIT related problems like anorexia, loss of appetite, abdominal pain, vomiting, constipation etc. Counseling is one of the key lines in the management of alcoholism. The person must be consoled or convinced intelligently, maintain the high level motivation, education is about alcohol and its hazardous effect on body must be known to everyone and introducing family or friends to stop protecting the person from the problems caused by the alcohol. As per *Ayurvedic* texts *Madatyaya* has clinical symptoms similar to alcoholism. For any disease main causative factors are imbalance of *Dosha* and *Dushya*. To cure any disease it is necessary to balance these factors. *Madatyaya* includes *Tridosha*, *Rasa* and *Rakta* as *dushya* and *Rasavaha*, *Raktavaha*, *Sangyavaha Shrotas*. *Hridaya* is the main *adhithan* due to which persons suffer from *Ojakshaya*, *Dhatukshaya*, *Sharirkampa*, *Pralapa*, *Bhrama*, *Agni Vikar*, *Anidra*. So drug having *Tridosha shamak* effect, and which increases *oja*, *bala*, *dhatu*, having *deepana*, *pachana*, *anulomana*, *yakrita uttejak*, *mutral*, *raktavardhak*, *raktashodhak*, *vishaghna*, *rasayan*, *medhya* properties will give relief from sign and symptoms. So, *Madatyaya* mentioned in *Ayurveda* can be correlated with the withdrawal symptoms of chronic alcoholism upto some extent.

CONCLUSION

Hence, it is concluded that *Madatyaya* (Alcohol Intoxication) is very well explained in *Ayurveda* text which helps us to know the pathogenesis, diagnosis and management of *madatyaya* depending on the involvement of the *Doshas*.

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Source of Support: Nil

Conflict Of Interest: None Declared

How to cite this URL: Rashmi Choudhary et al: A Critical Review On Madatyaya (Alcoholism). International Ayurvedic Medical Journal {online} 2018 {cited November, 2018} Available from:

http://www.iamj.in/posts/images/upload/2502_2508.pdf