

REVIEW OF MADA AVASTHA AND STAGES OF ACUTE ALCOHOL INTOXICATION

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ABSTRACT

Ayurveda is science of life which is divided in eight branches. *Agadtantra* is one of them which deal with study of *Visha (Poison)*. *Visha* are the substances which cause deleterious effect on the body after their consumption. Every drug has some therapeutic as well as toxic effects depending upon its dose and intension of consumption. *Madya* is having therapeutic properties in proper dose. If it is not consumed in proper dose and proper manner, then it affects like *Visha*. The attributes of *Visha* & *Madya* are same. *Acharya Charakacharya* has mentioned three *Mada Avastha*. The aim of this presentation is to study & correlate the concept of *Mada Avastha* with stages of acute alcohol intoxication. In this study, literary review of *Madya* & *Mada Avastha* from various *Ayurveda* texts is done. References for concept of alcohol & stages of intoxication in acute alcohol poisoning from books of contemporary sciences are collected. Analysis of the available literature concludes that the *Mada Avastha* and stages of alcohol intoxication are helpful for early diagnosis of *Madatyaya*. Stages of alcohol intoxication have medico legal importance to determine the alcohol blood level in the body.

Keywords: *Visha, Madya, Mada, Acute alcohol intoxication.*

INTRODUCTION

Ayurveda is science of life which is divided in eight branches. *Agadtantra* is one of them which deals with study of *Visha (Poison)*^[1]. Poison are the substances which cause deleterious effect on the body after their consumption^[2]. According to the *Acharya Charaka* the substance which causes sadness to the world is called as *Visa*^[3]. As the attributes of *Visha*^[4] & *Madya*^[5] are same and *Madya* can also affect like *Visha*, it is included in *Agadtantra* as *Madyavisha*. *Acharya Charak* and *Sushrut* has mentioned three *Mada Avastha*^[6] and *Acharya Madhava* has mentioned four *Mada Avastha*^[7]. According to the *Sharangdhar Samhita* the drug possessing *Tamoguna* predominantly cause derangement of the

mind called as *Madakari*^[8]. If *Visha* is consumed in quantified dose, it acts like *Amrutam* & if it is consumed in non-specified dose even *Amruta* will act like *Visha*^[9].

Alcohol causes addiction resulting into chronic health effects like cirrhosis of liver, alcoholic hallucinosis, hepatic carcinoma etc^[10]. The stages of alcohol intoxication provoke the symptoms of intoxication caused by increased consumption of alcohol. Identification of these stages in patients at the earliest stage will save the patient from hazardous complications. Hence this study is undertaken to correlate the concept of *Mada Avastha* with stages of acute alcohol intoxication. In this context, the available literature is reviewed and analyzed.

AIM - Study of *Mada Avastha* and stages of alcohol intoxication

OBJECTIVES

- To diagnose the patient of alcoholic intoxication earliest from the symptoms so as to save the patient from landing into next stages of alcohol intoxication.

Acharya Sarangadhara while describing the *Madakari* property included all the drugs with *tamoguna*. and which cause derangement of mind under *madya varga* or intoxicant Eg- *Sura, Madya* etc^[11]. The *madya* possessing the ten properties such as a *Laghu* (light), *Ushna*(hot), *Teekshana* (sharp), *Sukshma* (fine), *Amla* (sour), *Vyavayi* (quick absorption), *Ashu*(quick acting), *Ruksha* (Rough), *Vikasi* (depressant), *Vishada* (Non slimy). This *madya* having the opposite to the ten qualities of *Ojus*^[12].

The merits of *madyapana* are energy nourishment, happiness good health proper digestion toning of health promote voice and complexion removes fear induced sleep. Demerits of *madyapan* are *Moha, Bhaya, Shoka, Krodha, Mrutyu, Mada, Moorcha, Unmad, Apasmar, Aptanak. Effect Brain Dhruti, Bhruti, Bhrunsha, Trivarga Nash (Dharma, Earth, Kama), (Dhee, Dhairyaa, Lajja) Madya* entering in to heart vitiates *Ojus* by its apposite properties to that of *Ojus* The disease caused by improper and excesses drinking of *madya* are Treated by proper administration of *madya*^[13]. Effect of *madya* on entering the heart, counter acts in the ten properties of *Ojus*. *Charaka* has mentioned that, *madya* due to its apposite qualities to *Ojus* disturbs *satva*, which is the seat of *Ojus* and produces necrosis (*mada*)^[14]. According to *Ayurveda* classics, *Hridya* is the seat for the channels of *Rasa vata* and also for *satva* (psyche), *Buddhi* (intellect), *Indriya* (sense), *Atma* (soul) and *para Ojus*. Hence, excessive indulgence in *madya-*

pana damages *Ojus* and vitiating heart and there by deranging all the factor for which heart is the seat. When *Hridaya* is afflicted by *madya sevana*, it result in *vibhrama* or *mada*. Which is manifested in the form of exhilaration, thirst, enjoyment, happiness, mental aberration and unconsciousness^[15].

Mada Avastha:

1) **Purva avastha**^[16]

- *Praharshan*
- *Preetikar*
- *Pannangunadarshak*
- *Samyagbodhayati*
- *Uttam Buddhi, Smruti, Vishay dnyan*
- *Sukhanidraprabodha*
- *Sukhad avastha*.

2) **Madhyam avastha**^[17]

- *Muhu smruti muhu moha, Avyaktasajjati vangmuhu,*
- *Yuktayuktapralap prachalaynam,*
- *Sthana pana anna sankthyayogna viparyay.*

3) **Final stage (Tritiya avastha)**^[18]

- *Bhagnadaru eva nishkriya,*
- *Madamohavrutamana*
- *Jivat api mrute sama.*

Stages of Acute Alcohol Poisoning^[19]

1) **Stage of excitement** (blood alcohol level 0.05-0.1% i.e. 50-100mg/100ml of blood).

- Hesitation, caution, self criticism & restraint are lost first.
- There is feeling of well being & pleasure.
- Person usually talks well.
- Face is flushed, conjunctiva injected, pupils dilated, pulse increased & breath smells of alcohol.
- It increases the desire for sex but impairs the performance.

2) **Stage of in coordination-** (blood alcohol level 0.1-0.3% i.e. 100-300mg/100ml of blood).

- In coordination of thought, speech & action
 - There is confusion, impaired memory, slurred & incoherent speech, staggering gait, increased reaction time, impaired skilled movements, nausea & vomiting.
 - Eyes are suffused, pupils are dilated & slow reacting, breath smells of alcohol.
- 3) Stage of narcosis (Coma)-** (blood alcohol level 0.3-0.5% i.e. 300-500mg/100ml of blood)
- Patient is in deep sleep
 - Responds Only To Deep Stimuli
 - Excessive Salivation
 - Pulse Increased,
 - Temperature Decreased
- Contracted pupils & Lateral Nystagmus Seen.
 - On pinching the muscles of the face or neck pupils dilate & again become contracted on releasing the pinch.
- 4) Stage of medullary paralysis-** (blood alcohol level +0.5% i.e. more than 500mg/100ml of blood)
- Respiration is slow & stertous
 - Skin is cold, clammy & cyanotic
 - Pupils are dilated
 - Abolition of reflexes
 - Pulse becomes imperceptible

STAGES OF ACUTE ALCOHOLIC INTOXICATION ^[20]

BLOOD ALCOHOL CONCENTRATION grams/100 ml	STAGE OF INTOXICATION	CLINICAL SIGNS/ SYMPTOMS
0-50	Sobriety	Influence/effects usually not apparent or obvious Behavior nearly normal by ordinary observation Impairment detectable by special tests
50-100	Euphoria	Feeling of wellbeing, sociability, talkativeness, decreased inhibitions, fine movements affected
100-150	Excitement	Emotional instability, impairment of memory & comprehension, increased reaction time, mild ataxia
150-200	Confusion	Disorientation, confusion, vertigo, diplopia, ataxia, slurred speech, staggering gait.
200-300	Stupor	General inertia, diminished response to stimuli, inability to stand or walk, vomiting.
300-500	Coma	Unconsciousness, abolished reflexes, subnormal temperature, incontinence of urine, faeces, respiratory compromise.
>500	Death	Death from respiratory arrest

DISCUSSION

Acharya Charaka has mentioned merits^[21] and demerits of *Madya*^{[22]&[23]}. The merits of *madya* are energy, nourishment, happiness, good health, proper digestion, toning of health, promote voice and completion, removes fear, induce sleep. Demerits of *madya-pan* are *Moha, Bhaya, Shoka, Krodha, Mrutyu, Mada, Moorccha, Unmad, Apasmara, Apa-*

tanka effect Brain, *Dhrti, Smruti, Bhransha, Trivarga Nash (Dharma, Artha, Kama), (Dhee, Dhairya, Lajja)*. Effect of *madya* on entering the heart, counter acts the ten properties of *Ojus*. *Charaka* has mentioned that *madya* due to its opposite qualities to *Ojus* disturbs *satva*, which is the seat of *Ojus* and produces narcosis (*mada*)^[24].

Alcohol is classified as an inebriant poison^[25]. It is of two types: Ethyl and methyl alcohol. 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 the lungs, hence breath smells of alcohol. It causes generalized vasodilatation, is hypnotic, creates a feeling of warmth but the heat loss is more, stimulates appetite, is diuretic, diaphoretic & causes gastritis^[26].

If the alcohol is consumed regularly, inappropriately and in large dosages, it forms addiction and leads to acute as well as chronic poisoning. The symptoms mentioned in stages of alcohol intoxication are subjected to specific blood alcohol concentration. Hence these stages are helpful to diagnose the acute alcohol poisoning at the earliest so that life of the patient can be saved. The medico legal importance of the alcohol abuse is prevalent worldwide efforts have been made to totally prohibit alcohol consumption in different countries without much success (with the possible exception of those countries where religious law is in force)^[27]. At the present in india, total prohibition is in force only in Gujarat. Effort to implement the same in Tamil Nadu, Andhra Pradesh, and Haryana met with dismal failure. All over india except Gujarat the mere consumption of alcohol and consequent drunken behavior in themselves do not constitute any offence. Only when the drunken individual behaves in such a manner as to become a public nuisance, or poses a threat, or actually commits an act endangering the life or property of another person or (even his own), will the law take cognizance of the fact^[28]. There are increase chances of murder, rape, vehicular accidents, drowning^[29]. The Stages of alcohol intoxication have medico legal importance to determine the alcohol blood level in the body.

CONCLUSION

Stages of *Mada* described by the *Charaka* and stages of alcohol intoxication are helpful to diagnose the cases of alcohol intoxication earlier so as to save patient from landing into critical condition of complication.

REFERENCES

- 1) Lochan Kanjiv, Astangahrdayam of Vagbhata Sutra sthana Chapter-1, Chaukhamba Publication New Delhi, Edi-2008, Page No-2.
- 2) Singhal S K, Toxicology At A Glance, Reprint-2014, The National book depot Mumbai, Eight- Edition-2012, Page No-5.
- 3) Nesari manoj, Prasad V. V, Charak Samhita Vol-4 Chikitsasthan, Rashtriya Ayurveda Vidyapeeth Delhi, Edi- Agust- 2014, page No- 75.
- 4) Tripathi Indradev, Giri Kapil Dev, Rasaratana Sammucchya of Vagbhatacharya Vishakalpa Chikitsa, Chapter 29, Verse 21, Chaukhamba Sanskrit Sansthan, Second Edition- 2000. Page No -387.
- 5) Sastri Kasinatha, The Charaka Samhita of Chakrapani Datta, Vol-2, Chikitsasthan, Madyachikitsa, Chaukhambha Sanskrit sansthan, Chaukhambha Publication New Delhi. 2009, Page No-592.
- 6) Nesari manoj, Prasad V. V, Charak Samhita Vol-4 Chikitsasthan, Published by Rashtriya Ayurveda Vidyapeeth, Delhi, 2014, page No-160 to 164.
- 7) Tripathi Bramhanand, Madhava Nidanam, Vol-1, Chapter – 18, Chaukhamba Surbharrati Prakshan Varanasi, Reprint-2007, Page No-452,453.
- 8) Sastri Kasinatha, The Charaka Samhita of Chakrapani Datta, Vol-2, Chikitsasthan, Madyachikitsa, Chaukhambha Sanskrit Sansthan, Chaukhambha Publication New Delhi, 2009, Page No-562
- 9) Tripathi Bramhanand, Sarangdhara Samhita, Madhyamkhand, 10 Chaukhambha Ayurvednyan Granthamala -28, Chouk-

- hambha Surbharti Prakashan Varanasi Page No-50.
- 10) Pillay V.V, Text book of forensic medicine and Toxicology, Publish by Paras Medical Publisher Hyderabad, New Delhi, 15th Edi-2010, Page No-530,531.
- 11) Triphati Bramhanand, Sarangdhara Samhita Madhyamkhand Chapter 10 Chauhambha Ayurvednayan Granthamala -28, Chauhambha Surbharti Prakashan Varanasi Page No-50.
- 12) Nesari manoj, Prasad V. V, Charak Samhita Vol-4 Chikitsasthan, Published by Rashtriya Ayurveda Vidyapeeth Delhi, Edi- August- 2014, page No- 75.
- 13) Sastri Kasinatha, The Charaka Samhita of Chakrapani Datta Vol-2, Chikitsasthan,, Madyachikitsa chapter, Chauhambha Sanskrit sansthan, Chauhambha Publication New Delhi, Edition-2009, Page No- 592,593,594.
- 14) Sastri Kasinatha, The Charaka Samhita of Chakrapani Datta Vol-2, Chikitsasthan,, Madyachikitsa chapter, Chauhambha Sanskrit sansthan, Chauhambha Publication New Delhi, Edition-2009, Page No- 592,593.
- 15) Sastri Kasinatha, The Charaka Samhita of Chakrapani Datta Vol-2, Chikitsasthan,, Madyachikitsa chapter, Chauhambha Sanskrit sansthan, Chauhambha Publication New Delhi, Edition-2009, Page No- 592.
- 16) Nesari Manoj, Prasad V.V Charak Samhita vol-4 Chikitsasthan Published by Rashtriya Ayurveda Vidyapeeth, Delhi- 2014, varse -42,43, Page No-160 to 162.
- 17) Nesari Manoj, Prasad V.V Charak Samhita Vol-4 Chikitsasthan Published by rashtriya Ayurveda Vidyapeeth, Delhi- 2014, varse-44,45, Page No-162 to 164.
- 18) Nesari manoj, Prasad V.V Charak Samhita Vol-4 Chikitsasthan Published by Rashtriya Ayurveda Vidyapeeth, Delhi- 2014, varse-48 to 51, Page No-160 to 164.
- 19) Singhal S.K Singhal Toxicology At A Glance Eight Edition-2012, Published by The National Book Depot Mumbai, Page No-94 to 99.
- 20) Pillay V.V Modern Medical Toxicology Fourth Edition -2013, Jaypee Publication New Delhi. Page No-181 to 183.
- 21) Sharma Priyavat Charak samhita Agnive-sa's Published by Chauhambha Orientalia 6th Edition 2001, Vol- II, Chikitsasthan-24 Verse- 61, Page No.395.
- 22) Sharma Priyavat Charaksamhita Agnive-sa's Published by Chauhambha Orientalia 6th Edition 2001, Vol- II, Chikitsasthan- 24 Verse 52-53, Page No.394.
- 23) Murthy K R Srikant Astanga Hridayam of Acharya Vagbhata's Published by Krishnadas Academy Varanasi. Fourth Edition 2000. Vol- II, Chapter- 6, verse -8, Page 58.
- 24) Sastri Kasinatha, The Charaka Samhita of Chakrapani Datta Vol-2, Chikitsasthan, Madyachikitsa Edition-2009, Chauhambha Sanskrit Sansthan, Chauhambha Publication New Delhi. Page No-592,593,594.
- 25) Singhal S.K Singhal Toxicology At A Glance Eight Edition-2012, Published by The National Book Depot Mumbai, Page No-4 to 7.
- 26) Pillay V.V Modern Medical Toxicology Fourth Edition -2013, Jaypee Publication New Delhi. Page No-181 to 183.
- 27) Pillay V.V, Text book of forensic medicine and Toxicology, Publish by Paras Medical Publisher Hyderabad, New Delhi, 15th Edi-2010, Page No- 533.
- 28) Pillay V.V, Text book of forensic medicine and Toxicology, Publish by Paras Medical Publisher Hyderabad, New Delhi, 15th Edi-2010, Page No- 533.
- 29) Singhal S K, Toxicology At A Glance, Reprint-2014, The National book depot

Mumbai, Eight- Edition-2012, Page No-
98.

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