A case study on the management of alcohol dependence through Ayurveda

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ABSTRACT

Alcohol Use Disorder (AUD) is a medical condition characterized by problematic and unhealthy patterns of alcohol consumption. It encompasses a wide array of signs and behaviours associated with alcohol abuse and is recognized as one of the most prevalent psychiatric disorders, affecting a significant portion of the population. The repercussions of alcohol misuse extend beyond individual health, influencing various aspects of society such as social dynamics, economic factors, and public health. In Ayurveda, which embraces a holistic and comprehensive approach to life, alcoholism is referred to as Madatyaya. It is regarded as a lifestyle disorder and a detrimental dependency condition. The treatment of alcohol use disorder in Ayurveda is tailored to the patient’s strength (Rogi Bala) and the severity of the condition (Roga Bala), utilizing approaches such as Shamana, Shodhana, and Satvavaja Chikitsa. This case study aims to illustrate the holistic treatment of alcohol use disorder using Ayurveda, emphasizing the comprehensive approach to addressing this condition.

Key words: Madataya, Alcohol dependence, Yastimadhu Ksheera Basti

INTRODUCTION

Alcohol Use Disorder (AUD) is a medical condition characterized by unhealthy and inappropriate drinking practices. It encompasses a wide range of signs and behaviours associated with alcohol abuse and stands as one of the most prevalent psychiatric disorders in the nation, affecting a significant proportion of the population. The adverse impacts of alcohol abuse extend beyond individual health, encompassing social dynamics, economic issues, and public health concerns.

Throughout history, alcohol (Madya) has been ingrained in cultural and social life. When consumed responsibly and in adherence to societal norms, it can be like nectar; however, misuse transforms it into a poison.⁴ Human beings have grappled with the adverse effects of alcohol since ancient times and have developed strategies to address them.

Individuals struggling with alcohol addiction typically experience a shortened lifespan of 10 to 15 years, with alcohol use contributing to 22,000 fatalities and 2 million nonfatal injuries annually.⁵

Alcohol addiction or dependency affects at least 20% of patients in mental health settings, cutting across all socioeconomic backgrounds and genders.
Aims and Objectives

Management of Alcohol dependence with Yastimadhu Ksheera Basti

Patient Information
- Name: XYZ
- Age: 41 years
- Gender: Male
- Address: Bangalore
- Occupation: Engineer
- Socioeconomic Status: Middle Class
- Marital Status: Married

Chief Complaints

The patient complains of weakness, fatigue, reduced appetite, and disturbed sleep persisting for the past month. Additionally, he has experienced vomiting (3 episodes since morning) and irregular bowel movements for the past 7 days. It's important to note that the patient has been dependent on alcohol for the past 15 years.

History of Present Illness

A 41-year-old male patient, previously healthy, presented with a range of symptoms including generalized weakness, body ache, confusion, reduced appetite, disturbed sleep for the past month, as well as three episodes of vomiting since morning and irregular bowel movements for the last seven days.

Upon taking a medical history, it was revealed that the patient began consuming alcohol due to work-related stress fifteen years ago. Initially drinking 180 ml of liquor daily, his consumption gradually increased over time. Six years ago, he sought treatment at De Addiction Centre in Bangalore, where he underwent a ten-days therapy session. Following this, he abstained from alcohol for several months but relapsed and was subsequently admitted to one of the De-addiction Centre in Mysore for similar complaints. He managed to refrain from alcohol for a year; however, two months before his current presentation, he consumed a drink at a friend's wedding and resumed his daily alcohol intake. Seeking further management, he presented to our hospital

Clinical Findings

Asthathana Pariksha / Eightfold Examination

Nadi (Pulse) - Vata Pitta dominant, Mutra - Normal, Malā - Constipated, Jīvha - Coated, Shabda - Slurred, Druka - Pallor present, Aakruti- Lean built, Sparsha - Dry.

Systemic Examination

CNS - Confused and drowsy, CVS - S1 S2 audible, RS - Air entry bilaterally equal, Cerebellar - No Gait ataxia, No Tandem gait, No Dysmetria, No Dysdiadochokinesia.

Mental Status Examination

<table>
<thead>
<tr>
<th>General appearance and behaviour</th>
<th>Looks uncomfortable, evasiveness, adequate dressing, good hygiene and self-care.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speech</td>
<td>Non-spontaneous, decreased volume, hesitant.</td>
</tr>
<tr>
<td>Mood and affect</td>
<td>Mood - Sad; Affect - Restless.</td>
</tr>
<tr>
<td>Thought</td>
<td>Thought block. No delusions</td>
</tr>
<tr>
<td>Perception</td>
<td>No hallucinations.</td>
</tr>
<tr>
<td>Cognition</td>
<td>Consciousness - Intact, Orientation - Oriented to time, place, person, Attention - Slightly decreased, Concentration - Slightly decreased, Memory - Immediate-Intact, Recent-Intact, Remote-Intact, Intelligence - Intact</td>
</tr>
<tr>
<td>Insight</td>
<td>Grade 6</td>
</tr>
<tr>
<td>Judgement</td>
<td>Partially impaired.</td>
</tr>
</tbody>
</table>

Investigations

Based on the provided information

1. Ultrasonography (USG) shows Grade III fatty changes in the liver, indicating significant accumulation of fat in the liver tissue.
2. Haemoglobin (Hb) level is low at 8.4 gm/dl, suggesting anaemia.

3. Serum Glutamic Oxaloacetic Transaminase (SGOT) level is elevated at 351 IU/L, indicating liver damage or injury.

4. Serum Glutamic Pyruvic Transaminase (SGPT) level is also elevated at 121 IU/L, further suggesting liver damage or injury.

5. Serum Uric Acid level is high at 12.2 mg/dl, indicating hyperuricemia, which can be associated with conditions such as gout or kidney dysfunction.

6. Platelet count is low at 65,000/cumm, which may indicate thrombocytopenia, a condition characterized by a low number of platelets in the blood.

**Diagnostic Criteria**

1. **Chronic Alcoholism**: The patient has a history of chronic alcohol abuse or dependence, characterized by prolonged and excessive consumption of alcohol.

2. **Relapse**: The patient had previously stopped drinking but then resumed excessive alcohol consumption.

3. **Signs and Symptoms of Madatyaya Upadraha Dhwamsaka**: The patient exhibits manifestations associated with complications or adverse effects of alcoholism, such as:
   a) **Kantasya Shosha**: Dryness of the throat and mouth, which may be indicative of dehydration or mucosal irritation due to alcohol consumption.
   b) **Shabdasya Asahisnuta**: Intolerance to sound, suggesting sensory hypersensitivity or irritability commonly observed in alcohol withdrawal or hangover.
   c) **Tandra**: Excessive drowsiness, indicating lethargy or fatigue often experienced during alcohol withdrawal or as a consequence of alcohol-related central nervous system depression.
   d) **Nidra**: Sleep disturbances, such as insomnia or disrupted sleep patterns, which are frequently observed in individuals with alcohol use disorder.

Overall, the presence of these signs and symptoms in a patient with a history of chronic alcoholism who has relapsed indicates the manifestation of Madatyaya Upadraha Dhwamsaka, further confirming the diagnosis.

**Samprapthi**

Excessive consumption of alcohol, combined with an inadequate diet and heavy workload, acts as causative factors leading to the derangement of the three doshas, resulting in the disturbance of the Annavaha Srotas (digestive channels) and Agnimandya (digestive impairment). The improperly digested and corrupted food essence (Apachit and Dushit ahar rasa) traverses to affect the heart (Hridaya), causing disruption of the successive tissue layers (Uttarator Dhatu Shaithilya) and imbalance of vitality (Ojo Vikruthi). Additionally, the sharp (Tikshna), hot (Ushna), and acidic (Amla) qualities of alcohol contribute to the aggravation of Pitta and Vata Doshas, leading to inflammation of the mucosal lining of the stomach and colon, resulting in decreased nutrient absorption, particularly of vitamin B1 (Thiamine). This deficiency manifests in symptoms ranging from limb numbness and muscle weakness to mental and neurological deficits.

Moreover, the dry (Ruksha) and light (Laghu) qualities of alcohol exacerbate Vata Dosha, leading to depletion of the Majja Dhatu (bone marrow tissue) and consequent symptoms of nutritional and neurological deficiencies, as well as bodily aches and weakness. Furthermore, alcohol impacts the Manovaha srotas (mental channels), reducing the satva guna (quality of purity and clarity) and increasing Raja-Tama Guna (qualities of passion and ignorance), ultimately culminating in the development of Madatyaya (alcohol addiction).

**Samprapti Ghataka**

- **Dosha** - Tridosha, Raja, Tama
- **Dushya** - Manas, Saptha Dhatu
- **Srotas** - Manovaha, Rasavaha
- **Srotodustiprakara** - Sangha, Vimargagamana
- **Agni** - Jataragni
Udbhavasthana - Amashaya
Sancharasthana - Sarvasharira
Vyaktasthana - Manas, Sarvasharira
Adhistana - Hrudaya
Rogamarga - Madyama

Therapeutic intervention

The patient was initially managed with intravenous fluids, analgesics, antacids, and an enema was administered.

1st set treatment

<table>
<thead>
<tr>
<th>Shodhana Chikitsa (Purification Therapy)</th>
<th>Bahya Chikitsa</th>
<th>Bahya Chikitsa</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitya Virechana: Avipattikara Choorna 20g with warm milk in the morning empty stomach for 7 days</td>
<td>Talapotachil: Himasagara Taila + Amalaki Choorna for 3 days</td>
<td>Arogyavardini Vati: 1 tablet thrice daily after food</td>
</tr>
<tr>
<td>Sarvanga Dashamoola Pariseka</td>
<td>Manasamithravati: 2 tablets thrice daily after food</td>
<td>Tab. Anxit 0.25mg: 1 tablet at bedtime</td>
</tr>
</tbody>
</table>

2nd Set (after 3 days)

<table>
<thead>
<tr>
<th>Bahya Chikitsa</th>
<th>Shamana Chikitsa (Palliative Therapy)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shirohipchu with Himasagara Taila for 7 days</td>
<td>Thiamine 100mg: 1 tablet thrice daily</td>
</tr>
<tr>
<td>Surari with buttermilk</td>
<td></td>
</tr>
<tr>
<td>Sarpagandhavati 1 tablet at bedtime (After Food)</td>
<td></td>
</tr>
<tr>
<td>Sarvanga Dashamoola Pariseka</td>
<td>Saraswatharista 50ml at bedtime (Before Food)</td>
</tr>
<tr>
<td>Arogya Vardini Vati: 1 tablet thrice daily (After Food)</td>
<td></td>
</tr>
<tr>
<td>Manasamithravati: 1 tablet thrice daily (After Food)</td>
<td></td>
</tr>
</tbody>
</table>

In addition to the prescribed treatment regimen, the patient was advised to practice Pranayama, Brahamari, and Surya Namaskar

3rd Set (after 10 days)


<table>
<thead>
<tr>
<th>Shodhana Chikitsa (Purification Therapy)</th>
<th>Bahya chikitsa</th>
<th>Shamana Chikitsa (Palliative Therapy)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kalabasti: Yastimadhu Ksheera Basti Anuvasana Vasti with Mahathiktaka Ghrita</td>
<td>Sarvanga Dashamoola Pariseka</td>
<td>Surari with buttermilk</td>
</tr>
<tr>
<td>Abyanga with KBT (specific oil blend)</td>
<td>Shirodhara with coconut oil and Brahmi oil</td>
<td>Sarpagandhavati 1 tablet at bedtime (After Food)</td>
</tr>
<tr>
<td>Sarvanga Dashamoola Pariseka</td>
<td>Saraswatharista: 50ml at bedtime (Before Food)</td>
<td>Arogya Vardini Vati: 1 tablet thrice daily (After Food)</td>
</tr>
<tr>
<td>Manasamithravati: 1 tablet thrice daily (After Food)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Upon discharge, the patient was prescribed the following oral medications:

1. Surari with buttermilk
2. Sarpagandhavati: 1 tablet at bedtime (After Food)
3. Saraswatharista: 50ml at bedtime (Before Food)
4. Arogyavardini vati: 1 tablet thrice daily (After Food)
5. Manasamithravati: 1 tablet thrice daily (After Food)

Follow-Up

<table>
<thead>
<tr>
<th>Complaints</th>
<th>First follow up after 15 days</th>
<th>2nd follow up after 2 months</th>
</tr>
</thead>
<tbody>
<tr>
<td>The patient ceased alcohol consumption but began using</td>
<td>Weakness reduced, and there was no relapse</td>
<td></td>
</tr>
</tbody>
</table>
tobacco, resulting in weakness and dizziness. He was admitted for one day and managed with IV fluids and analgesics.

### Investigation
- **Haemoglobin (HB):** 9.4 g/dL
- **Serum Glutamic Oxaloacetic Transaminase (SGOT):** 66 IU/L
- **Serum Glutamic Pyruvic Transaminase (SGPT):** 31 IU/L
- **Platelet count:** 1 lakh/cumm (which is equivalent to 100,000 platelets/cubic millimeter)
- **Haemoglobin (HB):** 11.4 g/dL
- **Serum Glutamic Oxaloacetic Transaminase (SGOT):** 31 IU/L
- **Serum Glutamic Pyruvic Transaminase (SGPT):** 36 IU/L
- **Platelet count:** 2.77 lakhs/cumm (which is equivalent to 277,000 platelets/cubic millimeter)

### Medications
- **Shamana Ausahadi**
  - **Punarnava Mandura:** 2 tablets twice daily
  - **Brahmi Vati:** 1 tablet once daily
  - **Surari:** 1 sachet with buttermilk once daily
  - **Saraswatharista:** 50 ml at bedtime
- **Madatyaya**
  - **Tab. Punarnavamandura:** 2 tablets thrice daily with honey
  - **Cap. Ashwagandha:** 2 capsules twice daily (After Food)
  - **Saraswatharista:** 50 ml at bedtime

From the first follow-up to the second follow-up, there is an improvement in HB levels, SGOT, SGPT levels, and the platelet count, indicating improvement in the underlying condition.

### DISCUSSION
According to the *Chikitsa Sutra* (treatment principles), it is stated that all cases of *Madatyaya* (alcohol addiction) are *Tridoshaja*, meaning they involve all three Doshas - *Vata*, *Pitta*, and *Kapha*. Therefore, the treatment should initially target the predominant Dosha affected.

In the treatment of *Madatyaya*, the therapeutic approach begins with addressing the site of *Kapha*, followed by *Pitta* and then *Vata*. However, in cases where the patient is unsuitable for *Vamana* (therapeutic vomiting), alternative treatments such as *Nitya Virechana* (daily purgation) followed by *Basti* (enema therapy) are chosen. This sequential approach aims to gradually balance the *Doshas* and restore overall health and well-being in individuals affected by alcohol addiction.

- **Avipattikara Churna:** This herbal formulation contains ingredients with pungent, bitter, and sweet tastes, along with light, dry, sharp, and oily qualities. The main ingredient, *Trirut* (*Nishoth*), possesses pungent and bitter tastes, along with light, sharp, and dry qualities. It has properties that promote bowel movement, detoxification, and alleviation of inflammation, particularly beneficial in treating acid reflux (*Amlapitta*) by pacifying *Pitta Dosha*.

- **Punarnava Mandura:** This herbal formulation is effective in treating iron deficiency anaemia by increasing haemoglobin levels and enhancing total iron-binding capacity, thereby alleviating symptoms associated with anaemia.

- **Surari:** *Surari* is a natural herbal formulation designed to aid individuals in quitting alcohol and nicotine addiction. It contains ingredients such as soya powder, *Vidarikanda Churna*, *Jyoti smati Churna*, *Amlak Churna*, *Bibhitak Churna*, *Haritaki Churna*, which help reduce cravings for alcohol and nicotine while promoting overall health.

- **Shirodhara** with coconut oil and *Brahmi* oil: This therapeutic procedure involves pouring warm herbal oils over the forehead, which helps alleviate insomnia, depression, disorders caused by *Vata* and *Pitta* imbalances, weakness of the immune system, and memory loss.
**CASE REPORT**

**Arogyavardhini Rasa:** It is a widely used Ayurvedic herbo-mineral formulation for liver disorders. It aids in liver detoxification, balancing Doshas, and managing various conditions such as fever, skin diseases, obesity, and liver ailments.

**Yastimadhu Ksheera Basti:** Yastimadhu (Licorice) possesses anti-inflammatory, antioxidant, and hepatoprotective properties, which help in detoxifying the liver and reducing inflammation associated with alcohol dependence. It aids in balancing the Doshas, particularly Pitta and Vata, which are often deranged in individuals with alcohol dependence.

**Yastimadhu Ksheera Basti** helps in improving liver function, relieving gastrointestinal symptoms, and promoting overall well-being in individuals undergoing treatment for alcohol dependence.

**Mahatiktaka Ghrita:** with its detoxifying properties, may help in cleansing the body and supporting liver function, which can be particularly beneficial in cases of alcoholism where the liver is often affected. Additionally, some of the herbs in Mahatiktaka Ghrita may have calming or nervine properties, which could aid in managing cravings and withdrawal symptoms associated with alcohol addiction.

**Saraswatarishta:** This Ayurvedic formulation with anti-anxiety properties helps lower cortisol levels, thus reducing stress and improving sleep quality.

**Manasamithravati:** It exhibits protective effects on biochemical and neurochemical parameters in the blood and brain. It shows promise in safeguarding against cognitive decline during chemically-induced stress conditions, making it beneficial for addressing cognitive impairment in neurodegenerative disorders.

**Cap. Ashwagandha:** Ashwagandha is a potent rejuvenating tonic known for its various pharmacological actions, including anti-stress, neuroprotective, anti-tumor, anti-arthritis, analgesic, and anti-inflammatory properties. It is particularly effective in managing stress-related conditions, neurological disorders, and certain types of cancer.

**CONCLUSION**

It is concluded that Ayurveda provides a comprehensive understanding of Madatyaya, facilitating diagnosis and management based on the involvement of Dosha. Acharya Charak's perspective on alcoholism holds significant value due to its scientific literature study and description of both physical and mental characteristic symptoms. Ayurveda acknowledges alcoholism as a cardiotoxic and addictive substance. The symptoms of Pittaja Madatyaya can be compared with those of alcoholic hepatitis. The concept of alcoholic addiction can be illuminated through terms such as Dhwanasaka and Vikshay. Chronic alcoholism can be like a Pana Vibhrama, as mentioned. By reviewing and comparing the views of all Acharyas, concrete conclusions can be drawn regarding Madatyaya, including its causes, symptoms, pathophysiology, and the elaborate treatment line detailed by Acharya Charak.

Ayurvedic management protocols, along with rehabilitation measures, effectively alleviate symptoms of alcohol withdrawal and associated conditions. Shamana therapy or even Shodhana therapy can be administered depending on the severity of the condition, tailored to the individual's strength and the disease. Thus, Ayurveda provides an ultimate and effective solution for the management and rehabilitation of Madatyaya.

**REFERENCES**


How to cite this article: Sangamesh M, Raviprasad Hegde, Vinitha Dsouza. A case study on the management of alcohol dependence through Ayurveda. J Ayurveda Integr Med Sci 2024;5:284-290. http://dx.doi.org/10.21760/jaims.9.5.48

Source of Support: Nil, Conflict of Interest: None declared.