



A CONCEPTUAL AYURVEDIC APPROACH TO THE MANAGEMENT OF NON-ALCOHOLIC FATTY LIVER DISEASE (NAFLD): ROLE OF SHODHANA, DIET, AND LIFESTYLE

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ABSTRACT

Background : Non-Alcoholic Fatty Liver Disease (NAFLD) is a progressive global health concern characterized by excessive fat accumulation in the liver. It may progress from simple steatosis to Non-Alcoholic Steatohepatitis (NASH), fibrosis, cirrhosis, and hepatocellular carcinoma. NAFLD is strongly associated with metabolic syndrome, including obesity, dyslipidemia, and insulin resistance, reflecting altered metabolism and unhealthy lifestyle patterns. Its increasing prevalence highlights the need for preventive and holistic management approaches. **Objective :** To conceptually evaluate the role of Ayurvedic principles in understanding and managing NAFLD through correction of metabolic imbalance. **Conceptual Framework / Approach :** NAFLD can be correlated with Santarpanjanya Vyadhi in Ayurveda, caused by over-nutrition, sedentary habits, and impaired Agni . Agni mandya leads to Ama formation and vitiation of Kapha-Pitta Dosha, resulting in fat accumulation in Yakrit. Management includes Shodhana, Shamana therapy, Pathya diet, Vyayama, Yoga, and Pranayama. **Key Hypothesis / Insights :** Ayurveda helps restore Agni , reduce, and maintain Dosha balance. **Conclusion :** Ayurvedic management supports liver health and helps prevent disease progression. **Keywords :** NAFLD, Metabolic Syndrome, Ama, Shodhana, Shamana.

INTRODUCTION

Non-Alcoholic Fatty Liver Disease (NAFLD) is one of the most common chronic liver disorders worldwide and is strongly associated with obesity and metabolic syndrome. It is characterized by excessive fat accumulation in hepatocytes in the absence of significant alcohol intake. NAFLD represents a disease spectrum ranging from simple steatosis to Non-Alcoholic Steatohepatitis (NASH), which may further progress to fibrosis, cirrhosis, and hepatocellular carcinoma. ^[1]

Recent epidemiological studies estimate that approximately 25–32% of the adult population globally is affected by NAFLD, making it a major public health concern. ^[2]

From an Ayurvedic perspective, NAFLD can be correlated with **Yakrit Vikara**, **Medoroga**, and **Santarpanottha Vyadhi**. ^[3] Impairment of **Agni (metabolic function)** leads to formation of **Ama (metabolic toxins)** and abnormal increase of **Meda Dhatu (adipose tissue)**. ^[4] These pathological processes result in dysfunction of **Medovaha Srotas** and accumulation of fat in the liver. ^[5]

Ayurvedic management focuses on correcting Agni, eliminating Ama, balancing Doshas, and reducing excess Meda through **Shodhana**, **Pathya diet**, and **lifestyle regulation**. Shatkarma procedures described in Yogic and Ayurvedic texts help cleanse body channels (*Srotoshodhana*), improve metabolism, and restore physiological balance. ^[6]

Thus, integrating Shodhana, dietary regulation, and lifestyle modification offers a comprehensive conceptual approach to the management of NAFLD by addressing the root cause rather than only symptomatic relief.

AIM AND OBJECTIVE

1. To explain the hypothetical role of Shatkarma Shodhana and Ayurvedic Pathya diet in the management of NAFLD.
2. To identify safe, economical, and easily applicable lifestyle interventions for metabolic disorders like NAFLD.

MATERIAL AND METHOD

This conceptual study is based on classical Ayurvedic literature including **Charaka Samhita, Sushruta Samhita, Ashtanga Sangraha, Sharangadhara Samhita, Bhavaprakasha, Yogaratnakara, Madhava Nidana, Hatha Yoga Pradeepika, Gheranda Samhita, and Patanjali Yoga Sutra**, along with contemporary medical literature.

Ayurveda correlates NAFLD with Santarpanjanya Vyadhi caused by excessive intake of **Guru (heavy), Snigdha (unctuous), and Abhishyandi (channel-blocking)** foods along with sedentary lifestyle and daytime sleep. These factors lead to **Kapha-Pitta Dushti**, impaired Agni, Ama formation, and Meda accumulation in Yakrit.

Conceptual Role of Shodhana in Samprapti Vighatana

According to classical texts, Shodhana therapy is indicated in Bahu Dosha Avastha and Santarpanjanya disorders. ^[6]

Shatkarma practices may contribute to:

- Ama Nirharana (removal of metabolic toxins)
- Kapha-Pitta Shamana
- Agni Deepana (metabolic stimulation)
- Srotoshodhana (channel cleansing)
- Medohara effect (fat reduction)

Relevant Shatkarma Practices in NAFLD Context

- **Kapalbhati** – improves metabolism and reduces Kapha accumulation ^[7]
- **Agnisar Kriya** – stimulates digestive fire and supports liver function ^[8]
- **Vaman Dhauti** – assists in removal of Ama and Kapha ^[9]
- **Yogic Basti** – regulates Apana Vata and metabolic balance ^[10]

Dietary recommendations described in classical texts include use of Yava (barley), Mudga (green gram), Kulattha (horse gram) and other Laghu Ahara which may help reduce Meda accumulation and improve metabolism. Stored rice, Mudga, Kulattha, Uddalaka, Kodrava, Kutki and other foods which may help to deplete fats are to be practised regularly. Medicated smoking, consuming food after digestion, eating only barley and wheat, fasting, sleeping on uneven and hard bed, mental stamina, patience and letting out depression may be helpful to a patient of obesity. These factors may reduce or deplete fat deposits. The problems due to excess eating and obesity may be relieved by physical exercises, mental strain, sexual intercourse, walk, use of honey and awakening at night. Obesity may be relieved by consuming a diet comprising of Yava (barley) and Syamāka (millets) mixed with Cavya, Jiraka, Trikatu, Hingu, Sauvarca salt and Citraka. Curd water and powdered barley flakes may suppress fats and promote appetite. ^[11]

DISCUSSION

1. Addressing Root Causes

Ayurveda emphasizes Nidana Parivarjana (removal of causative factors) including avoidance of heavy diet, sedentary lifestyle, and improper dietary habits responsible for metabolic imbalance.

2. Role of Shodhana Therapy

Purification therapies help eliminate vitiated Doshas and clear obstructed Srotas, thereby improving metabolic processes. ^[12]

3. Correction of Agni and Ama

Agni Deepana and Ama Pachana help restore metabolic efficiency and prevent further fat accumulation.

4. Hepatoprotective Potential

Herbs like **Kutki (Picrorhiza kurroa)** are described with hepatoprotective and metabolic regulatory properties in classical literature. ^[13]

5. Conceptual Clinical Significance

The integrative Ayurvedic approach combining diet, lifestyle, and Shodhana may help reduce risk factors associated with NAFLD and improve metabolic health.

CONCLUSION

Ayurvedic principles emphasize correction of metabolic imbalance through Shodhana, Pathya diet, and lifestyle modification. Practices such as Kapha-Pitta pacifying diet, Vyayama, Yoga, and Pranayama aim to restore Agni, reduce Ama, and regulate Meda metabolism.

This conceptual framework highlights the potential role of Ayurvedic management in reducing hepatic steatosis and preventing disease progression. Further clinical research is required to validate these traditional principles in modern evidence-based settings.

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