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A CONCEPTUAL AND CLINICAL STUDY ON NON-ALCOHOLIC FATTY LIVER DISEASE (NAFLD): AN AYURVEDIC PERSPECTIVE

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ABSTRACT

Non-alcoholic fatty liver disease (NAFLD) has emerged as a predominant global health concern, representing a spectrum of liver conditions ranging from simple steatosis to non-alcoholic steatohepatitis (NASH), fibrosis, and terminal cirrhosis. In Ayurveda, NAFLD is understood through the framework of *Santarpanajanya Vyadhi* (diseases of over-nutrition) and *Medoroga* (metabolic disorders). The pathology involves a complex interplay between *Mandagni* (impaired digestion), *Ama* (metabolic toxins), and the vitiation of *Kapha* and *Medas* (fatty tissue) localized in the *Yakrit* (liver). This study synthesizes modern hepatology with classical Ayurvedic wisdom, outlining a comprehensive management protocol including *Nidana Parivarjana*, *Shodhana* (Virechana), and *Shamana* therapies to offer a holistic paradigm for reversing metabolic derangement.

KEYWORDS: Non-Alcoholic Fatty Liver Disease (NAFLD), Yakrit, Medoroga, Agni, Virechana, Metabolic Syndrome, *Santarpanajanya Vyadhi*, Hepatology.

INTRODUCTION

In the 21st century, NAFLD has evolved into a "silent epidemic." Modern pathophysiology identifies insulin resistance as the primary driver, leading to an influx of free fatty acids into

hepatocytes. Ayurveda offers a nuanced view of the liver as the seat of *Ranjaka Pitta*—the fire responsible for the transformation of *Rasa* (plasma) into *Rakta* (blood).

1. *The Ayurvedic Concept of Yakrit (The Liver)*

The *Yakrit* is formed from the essence of *Rakta Dhatu*. As a *Pitta-sthana* (site of Pitta), any metabolic dysfunction involving fat (*Medas*) inevitably affects the metabolic fire (*Agni*). NAFLD is essentially a "cooling" of the liver's metabolic activity by the "heavy" and "slimy" qualities of *Kapha*.

2. Global and National Burden

Globally, NAFLD prevalence is 25-30%. In India, it reaches 32%, with a rising phenotype known as **"Lean NAFLD"** occurring in non-obese individuals, often attributed to *Manasika Hetu* (stress) impairing *Agni*.

AIMS AND OBJECTIVES

1. To correlate NAFLD stages with *Ayurvedic Samprapti*.
2. To analyze the role of *Dhatvagni Mandya* in fat accumulation.
3. To evaluate *Virechana* as the gold-standard treatment.
4. To categorize *Lekhaneeya* (scraping) and Hepatoprotective herbs.
5. To integrate Yoga as a metabolic stimulant.

Conceptual Review: Pathophysiology

Ayurvedic Term	**Modern Correlation**
Jatharagni Mandya	Impaired central metabolism
Ama	Metabolic endotoxins / Oxidative stress
Sroto-dushti	Biliary/Cellular obstruction
Medo-dhatu Agni Mandya	Impaired lipid oxidation

The Four Stages of Samprapti (Pathogenesis)

1. **Sanchaya & Prakopa:** Vitiated *Kapha* and *Ama* accumulate; the liver becomes heavy (*Gaurava*).
2. **Prasara & Sthana-Samsraya:** *Pitta* involvement (*Anubandha*) creates inflammation (NASH).
3. **Vyakta:** *Vata* causes *Roukshya* (dryness), leading to scarring (Fibrosis).
4. **Bheda:** *Soshana* (atrophy) of the liver; the irreversible stage (Cirrhosis).

Nidana: Etiology of Liver Fat

- **Aharaja (Dietary):** Overeating (*Ati-Bhojana*), excessive sweets, and curd at night (*Dadhi*).
- **Viharaja (Lifestyle):** Physical inactivity (*Avyayama*) and daytime sleep (*Divaswapna*).
- **Manasika (Psychological):** Chronic stress and anger impairing *Rasavaha Srotas*.

Management Protocol (Chikitsa)

The core principle is **Apatarpana** (depletion) and **Lekhana** (scraping).

1. Shodhana: Bio-Purification

- **Virechana (Therapeutic Purgation):** The treatment of choice. It expels excessive *Pitta/Kapha* and clears the *Raktavaha Srotas*.
- **Protocol:** Internal oleation (*Snehapana*) with *Mahatiktaka Ghrita* followed by *Trivrit* or *Katuki*.

2. Shamana: Palliative Care

- **Deepana-Pachana:** *Chitrakadi Vati* to restore *Agni*.
- **Lekhaneeya (Scraping) Agents:** *Navaka Guggulu* or *Triphala Guggulu* to metabolize fat.
- **Liver Specifics:** *Arogyavardhini Vati* (cholagogue) and *Punarnavadi Kwath* (anti-inflammatory).

3. Rasayana: Rejuvenation

- **Bhumi-Amalaki:** Reduces lipid peroxidation and protects hepatocytes.
- **Guduchi:** Prevents progression to fibrosis via immunomodulation.

Diet and Lifestyle (Pathya-Apathya)

Category	Pathya (Recommended)	Apathya (Forbidden)
Grains	Old Barley (*Yava*), Millets	Refined flour, New rice
Vegetables	Bitter gourd, Drumsticks	Excessive tubers (Potato)
Liquids	Buttermilk with Cumin, Warm water	Alcohol, Sweetened sodas
Habits	Kapalbhati, Surya Namaskar	Sleeping after meals, Sedentary life

CONCLUSION

NAFLD is a disease of metabolic "clogging." The Ayurvedic approach of *Virechana* followed by *Lekhana* herbs offers a clinically viable method to reverse early-

stage NAFLD. Integrating modern diagnostic tools like **MRI-PDFF** with Ayurvedic protocols can provide the evidence-based validation required for global acceptance.

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