



RESEARCH ARTICLE

EFFECT OF NIDANA PARIVARJANA, DIETARY REGULATION, AND AYURVEDIC THERAPEUTICS IN FATTY LIVER WITH ASSOCIATED DYSLIPIDEMIA

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Abstract

This case study presents a 27-year-old male diagnosed with Medoroga (dyslipidemia), complicated by Yakrit Roga (Grade II fatty liver) and Ashmari (renal calculus). The Ayurvedic management was based on classical principles emphasizing Nidana Parivarjana (avoidance of causative factors), Pathya-Apathya (dietary regulation), and Shamana Chikitsa (palliative treatment). The intervention aimed at correcting Medo-Dhatvagni Mandya (impaired lipid metabolism) and clearing Srotorodha (microchannel obstruction), thereby restoring Dosha balance. Appropriate Ayurvedic formulations and lifestyle modifications, resulted in significant clinical improvement. Ultrasonographic evaluation revealed notable improvement in liver and kidney. The patient also demonstrated enhanced physical and emotional well-being. This case highlights the holistic and individualized approach of Ayurveda in managing Santarpanjanya Vyadhi (diseases of over-nutrition) like dyslipidemia, offering a sustainable, non-invasive, and effective treatment modality for metabolic disorders and associated complications.

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Introduction:-

Dyslipidemia refers to abnormal levels of lipids (fats) in the blood, including elevated total cholesterol, low-density lipoprotein cholesterol (LDL-C), triglycerides (TG), and reduced high-density lipoprotein cholesterol (HDL-C). It is one of the major risk factors for atherosclerosis, cardiovascular disease (CVD), stroke, and metabolic syndrome. The condition often remains asymptomatic, earning it the nickname "silent killer" due to its progressive damage to blood vessels and organs. [1] Dyslipidemia is categorized into two main types: primary and secondary. Primary dyslipidemia typically results from inherited genetic conditions, such as familial hypercholesterolemia. In contrast, secondary dyslipidemia develops due to lifestyle-related factors or underlying health issues like obesity, type 2 diabetes, hypothyroidism, chronic kidney disease, and alcohol consumption. The condition manifests in different

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forms, including hypercholesterolemia (high total cholesterol or LDL-C), hypertriglyceridemia (elevated triglycerides), mixed dyslipidemia (a combination of high LDL-C and triglycerides with low HDL-C), and isolated low HDL-C, which is frequently associated with metabolic syndrome.^[2] Excess circulating lipids, particularly LDL-C, undergo oxidative modification and are deposited in the arterial wall, initiating an inflammatory cascade. This leads to plaque formation, endothelial dysfunction, and narrowing of arteries (atherosclerosis), which are precursors to coronary artery disease and stroke. In cases like non-alcoholic fatty liver disease (NAFLD), lipid accumulation in the liver (hepatic steatosis) is commonly associated with dyslipidemia, contributing to metabolic dysfunction and insulin resistance.

^[3] Dyslipidemia is mainly diagnosed through a fasting lipid profile, which measures total cholesterol, LDL-C, HDL-C, and triglyceride levels. These blood tests help identify abnormal lipid levels that increase the risk of cardiovascular and metabolic diseases. In addition to lab tests, imaging techniques such as ultrasound and elastography can detect fatty liver, a common complication of dyslipidemia. Furthermore, kidney scans may reveal related conditions like nephrolithiasis (kidney stones), which can be linked to underlying metabolic imbalances associated with lipid disorders.^[4] Recent developments in dyslipidemia treatment include advanced therapies targeting lipoprotein(a) and LDL-C, such as lepodisiran, muvalaplin, and pelacarsen, which have demonstrated up to 95% reductions in Lp(a) levels in early trials, while agents like AZD0780, inclisiran, and VERVE-101 show significant LDL-C lowering through oral, siRNA, or gene-editing approaches. Additionally, novel therapies including solbinsiran, lerodalcibep, plozasiran, and pemafibrate are emerging with promising efficacy and safety profiles in early-phase studies.^[5,6,7]

In Ayurveda, dyslipidemia—characterized by abnormal lipid levels—is seen as Medoroga (disorder of Meda dhātu) or Medodushti (vitiation of fat tissue), arising from impaired Medo-Dhatwagni (lipid metabolism) and obstruction (Srotorodha) in microchannels (Srotas) due to metabolic imbalances. It aligns with the concept of Santarpanjanya Vyadhi, diseases arising from over-nutrition and sedentary habits. This condition is often precipitated by factors such as Avyayama (lack of exercise), Adhyashana (overeating), consumption of Guru-Snigdha Ahara (heavy, oily foods), Divasvapna (daytime sleeping), Ati Madhura (excessive sweets), and Beejadoshha (genetic predisposition). Panchakarma therapies such as Virechana and Lekhana Basti have shown significant lipid-lowering and metabolic benefits in clinical studies, with outcomes comparable to conventional statins, especially when combined with ayurvedic formulations. Additionally, ayurvedic interventions and dietary regimens rooted in Mitahara and Nidana Parivarjana play a crucial role in correcting lipid imbalances and supporting long-term cardiovascular health.

Objective:-

To evaluate the efficacy of Ayurvedic interventions, including Nidana Parivarjana, Pathya-Apathya, and Shamana Chikitsa, in correcting Medo-Dhatvagni Mandya, clearing Srotorodha, and restoring Dosha balance in Medoroga with associated Yakrit Roga and Ashmari.

Case Report:-

A 27-year-old male with a confirmed diagnosis of dyslipidemia (Medoroga) visited to Jeena Sikho Lifecare Limited Hospital, Vadodara, Gujarat, India, on March 12, 2025. Recent ultrasonography dated March 11, 2025, revealed a liver of normal size and morphology, exhibiting increased echotexture with focal fatty sparing, consistent with Grade II hepatic steatosis (Yakrit Roga). The gallbladder, pancreas, spleen, prostate, and urinary bladder were unremarkable without significant abnormalities. A 6 mm calculus (Ashmari) was identified in the lower calyx of the left kidney, with no evidence of obstruction or hydronephrosis. Other abdominal structures appeared normal, with no free fluid accumulation or lymphadenopathy observed. Clinical parameters, including vital signs, are documented in Table 1, and findings from the Ashtasthana Pareeksha are summarized in Table 2, with baseline ultrasonographic data presented in Table 3. Pre-treatment laboratory investigations are provided in Table 4. Following a comprehensive Ayurvedic evaluation, a personalized therapeutic regimen was developed, incorporating Ayurvedic pharmacotherapy (Shaman) alongside customized dietary (Ahar) and lifestyle (Vihar) modifications.

Table 1: Vitals from each consult

Date	Blood Pressure	Pulse Rate	Weight
12-03-2025	120/90 mm Hg	74/min	61.900 Kg
12-04-2025	110/70 mm Hg	59/min	59.200 Kg
14-06-2025	130/80 mm Hg	78/min	60 Kg
16-08-2025	110/60 mm Hg	61/min	62 Kg

Table 2: Ashtasthana Pareeksha of the patient

Parameters	Findings
<i>Nadi</i> (Pulse)	<i>VatajPittaj</i>
<i>Mala</i> (Stool)	<i>Avikrit</i> (Normal)
<i>Mutra</i> (Urine)	<i>Avikrit</i> (Normal)
<i>Jiwha</i> (Tongue)	<i>Saam</i> (Coated)
<i>Shabda</i> (Voice)	<i>Spashta</i> (Clear)
<i>Sparsh</i> (Touch)	<i>Anushnasheet</i> (Normal)
<i>Akriti</i> (Physique)	<i>Madhyam</i> (Normal)
<i>Drik</i> (Eyes)	<i>Prakrit</i> (Normal)

Table 3: Pre-treatment ultrasonographic data as of March 11, 2025

Organ/System	Findings	Remarks/Impression
Liver	Normal size and shape; generalized increased echotexture with few areas of focal fatty sparing. Grade II fatty liver.	No IHBR dilation; normal CBD and portal vein.
Gallbladder	Partially distended with normal wall thickness; no sludge or calculus; no pericholecystic collection.	No abnormalities detected.
Pancreas	Normal size and echotexture; no bulky or hypoechoic areas; no peripancreatic fluid; pancreatic duct not dilated.	Normal appearance.
Spleen	Normal size and shape with homogenous echotexture; no focal or diffuse mass seen; splenic vein normal at hilum.	No abnormalities detected.
Right Kidney	Normal size, shape, echotexture; well-preserved cortico-medullary differentiation; no focal/diffuse lesion, stone, or hydronephrosis.	Normal right kidney.
Left Kidney	6 mm calculus in lower calyx; normal size, shape, echotexture; well-preserved cortico-medullary differentiation; no focal/diffuse lesion or hydronephrosis.	Left renal calyceal calculus without obstruction.
Urinary Bladder	Partially distended; no calculus or focal mass; normal wall thickness.	No abnormalities detected.
Prostate	Normal size (12 cc), shape, and echotexture; no focal/diffuse mass lesions.	Normal prostate.
Prevoid Volume	400 cc	
Postvoid Volume	10 cc (insignificant residual urine)	
Peritoneal Cavity	No free fluid noted	No ascites.
Bowel Wall	Thickness within normal limits	
Lymphadenopathy	No significant intra-abdominal lymphadenopathy	
Impression	Left renal calyceal calculus without obstructive changes. Fatty liver Grade II.	

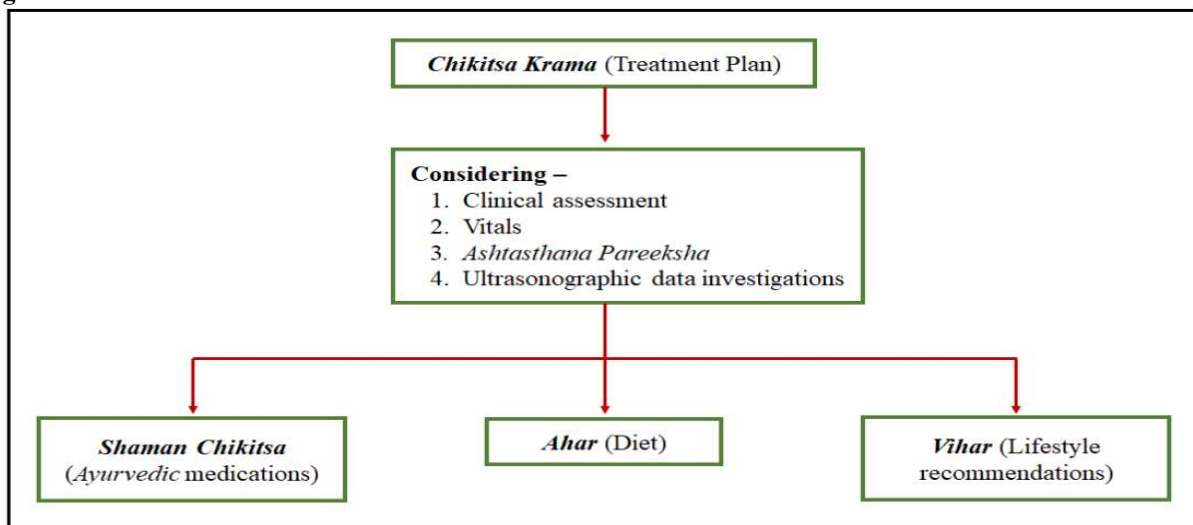
Table 4: Pre-treatment laboratory findings as of March 08, 2025

Tests	Values
Total Cholesterol	241 mg/dl
high-density lipoprotein (HDL) cholesterol	48 mg/dl
Non HDL Cholesterol	193 mg/dl
low-density lipoprotein (LDL) cholesterol	139 mg/dl
Very Low-Density Lipoprotein (VLDL) cholesterol	60 mg/dl
Triglycerides	301 mg/dl

Treatment Plan:-

The treatment approach has been systematically outlined in Figure 1, depicting the structured framework of the Chikitsa Krama.

Figure 1: Chikitsa Krama of this case



Shaman Chikitsa:-

Based on the clinical evaluation, a detailed and patient-specific medication protocol was devised, as outlined in Table 5.

Table 5: Ayurvedic medicines prescribed

Date	Medicines	Dosage with Anupana (Medium)
12-03-2025	Uder Vikar Janya Rog Churna	Half teaspoon BD (Adhobhakta with Koshna Jala) *
	Arogya Vati tablet	1 Tab BD (Adhobhakta with Koshna Jala)
	Relivion powder	Half Teaspoon HS (Nishikala with Koshna Jala)
	Ciro - Care	1 Cap BD (Adhobhakta with Koshna Jala)
	Yakrit Tonic	15 ml BD (Adhobhakta with Sama Matra Koshna Jala) **
	Lipi Capsule	2 Cap BD (Adhobhakta with Koshna Jala)
12-04-2025, 14-06-2025 & 16-08-2025	Uder Vikar Janya Rog Churna	Half teaspoon BD (Adhobhakta with Koshna Jala)
	Arogya Vati tablet	1 Tab BD (Adhobhakta with Koshna Jala)
	Ciro - Care	1 Cap BD (Adhobhakta with Koshna Jala)
	Yakrit Tonic	15 ml BD (Adhobhakta with Sama Matra Koshna Jala)
	Lipi Capsule	2 Cap BD (Adhobhakta with Koshna Jala)
* Adhobhakta with Koshna Jala - After Meals with Lukewarm Water		
** Adhobhakta with Sama Matra Koshna Jala - After Meals with Equal Amount of Lukewarm		

Ahar:-

A targeted dietary strategy, notably the incorporation of a diabetes-specific meal plan, is essential in mitigating the progression of Dyslipidemia. In this case, a personalized diet regimen was meticulously formulated to address the patient's specific clinical requirements.^[8]

Pathya (allowed):^[9, 10]

- Fresh and homemade food
- Millet diet
- Fresh fruits

Apathya (Avoid):^[9, 10]

- Wheat, Packed food, Refined food, Dairy food/ Animal food, Coffee and Tea
- Nutritional Supplements
- Never eat after 8 PM
- Non-steroidal anti-inflammatory drugs (NSAIDs)
- In solid take small bite and chew 32 times
- In liquid take sip and drink slowly

Hydration^{[11]:-}

- Boil 2 litres of water, reduce it to half (1 litre) and consume
- Alkaline water - 3-4 times a day (1 litre)
- Herbal tea (32 herbs tea)
- Living water
- Coconut water and Coconut milk
- Almond milk

Millet Meal^{[12]:-}

- Foxtail (*Setaria italica*)
- Barnyard (*Echinochloa esculenta*)
- Little (*Panicum sumatrense*)
- Kodo (*Paspalum scrobiculatum*)
- Browntop (*Urochloa ramosa*)

Grains^{[13]:-}

- Chanaka (Bengal gram) – *Cicer arietinum*
- Adhaki (Toor dal) - *Cajanus cajan*
- Mugda (Green gram) - *Vigna radiata*
- Kulattha (Horse gram) - *Macrotyloma uniflorum Lam.*

Special Instructions^{[11]:-}

- Brisk walking 30 min with barefoot
- Sit in sunlight for 1 hour
- 10 min slow walk after every meal
- One day fasting is recommended
- Get quality sleep (8 hours)
- Cook millets in a steel cookware using only mustard oil.
- Sit in Vajrasana after every meal

Meal Structure^[11]

Early Morning (5:45 AM) <ul style="list-style-type: none"> 4 Crushed tulsi leaves + 1 gm ginger + 2 spoons of honey + hot water = on empty stomach / Herbal Tea 	Breakfast (09:00 - 10:00 AM) <ul style="list-style-type: none"> Plate 1: Seasonal fruits (4-5 types) + <i>Mugdayusha</i> Plate 2: Millet <i>Khichdi</i> / Millet <i>Poha</i> / Millet <i>Upma</i> 	Morning Snacks (11:00 AM) <ul style="list-style-type: none"> Red Juice (Beetroot, Carrot, Tomato & Pomegranate) – 150 ml Soaked Almonds (4-5)
Lunch (12:30 -02:00 PM) <ul style="list-style-type: none"> Plate 1: Steamed Salad (Cucumber, Onion, Carrots, Beetroot, Tomato, Radish, Lettuce leaves, Capsicum, etc.) Plate 2: Fermented Millet Meal 	Evening Snacks (04:00 - 04:20 PM) <ul style="list-style-type: none"> Green Juice (Spinach, Fenugreek, Bathua, Amaranth, Mint, Coriander, Curry leaves & betel leaves) – 100 – 150 ml Soaked Almonds (4-5) 	Dinner (06:15 - 07:30 PM) <ul style="list-style-type: none"> Plate 1: Steamed Salad Plate 2: Green Vegetable Soup

Herbal Tea: ^[11]

Gauzaban (*Borago officinalis*), **Kulanjan** (*Alpinia galanga*), **Badi Elaichi** (*Amomum subulatum*), **Laung** (*Syzygium aromaticum*), **Badiyan Khtayi** (*Illicium verum*), **Banafsha** (*Viola odorata*), **Jufa** (*Hyssopus officinalis*), **Ashwagandha** (*Withania somnifera*), **Mulethi** (*Glycyrrhiza glabra*), **Punarnava** (*Boerhavia diffusa*), **Brahmi** (*Bacopa monnieri*), **Chitrak** (*Plumbago zeylanica*), **Marich** (*Piper nigrum*), **Adoosa** (*Justicia adhatoda / Adhatoda vasica*), **Saunf** (*Foeniculum vulgare*), **Shankh Pushpi** (*Convolvulus pluricaulis*), **Arjun** (*Terminalia arjuna*), **Tulsi** (*Ocimum sanctum*), **Motha** (*Cyperus rotundus*), **Senaye** (*Cassia angustifolia*), **Sounth** (*Zingiber officinale*, dried ginger), **Majeeth** (*Rubia cordifolia*), **Sarfoka** (*Tephrosia purpurea*), **Dalchini** (*Cinnamomum zeylanicum*), **Gulab** (*Rosa damascena*), **Green Tea** (*Camellia sinensis*), **Giloy** (*Tinospora cordifolia*), **Tej Patta** (*Cinnamomum tamala*), **Lal Chandan** (*Pterocarpus santalinus*), **White Chandan** (*Santalum album*) and **Pudina** (*Mentha piperita*)

Red Juice ^[11]

- A 150 ml formulation was prepared using a combination of beetroot, carrot, tomato, and pomegranate.

Green Juice ^[11]

- A 150 ml preparation was formulated using spinach, fenugreek, bathua, amaranth, mint, coriander, curry leaves, and betel leaves,

Green Vegetable Soup: ^[11]

- Spinach, Peas, Carrots, Cabbage, Capsicum, Ghee, Zucchini, Cucumber, Green Gram, etc. (10 grams each)
- Add Ginger, Garlic and Black Salt
- Grind & boil for a minute
- Add lemon as per taste & serve

Vihar ^[11]

- Meditation:** The patient was advised to incorporate a one-hour daily meditation practice as part of the prescribed therapeutic protocol.
- Yoga:** The patient was recommended to practice Sukshma Pranayama and Sukhasana for 40 minutes daily.
- Sleep:** The patient was advised to maintain 6 to 8 hours of continuous and restorative sleep each night.
- Walking:** The patient was instructed to perform a daily 30-minute brisk walk without footwear.
- Daily Routine:** The patient was advised to follow a structured and disciplined daily regimen.

Observations and Results:-

Throughout the treatment period, the patient showed consistent and progressive clinical improvement. Assessments of quality of life indicated marked enhancement in both physical and emotional health. Significant changes were noted across four outpatient consultations. Ultrasonographic results revealed a notable improvement in liver and kidney, as presented in Table 6. Additionally, laboratory evaluations revealed significant decreases in key biochemical parameters, as detailed in Table 7.

Table 6: Pre and Post – treatment Ultrasonographic evaluations

Parameter	Before Ayurvedic Intervention (11/03/2025)	After Ayurvedic Intervention (14/06/2025)
Liver Echotexture	Generalized increased echotexture with focal fatty sparing – Fatty Liver Grade II	Normal echogenicity, no fatty infiltration or fibrosis noted
Left Kidney	6 mm calculus in lower calyx, no obstruction/hydronephrosis	Normal
Final Impression	Fatty Liver Grade II	No focal lesion or fatty change; Normal elastography findings
	Left renal calyceal calculus (6 mm)	

Table 7: Pre and Post – treatment laboratory evaluations

Tests	Values	
	08-03-2025	08-08-2025
Total Cholesterol	241 mg/dl	160 mg/dl
high-density lipoprotein (HDL) cholesterol	48 mg/dl	42 mg/dl
Non HDL Cholesterol	193 mg/dl	118 mg/dl
low-density lipoprotein (LDL) cholesterol	139 mg/dl	81 mg/dl
Very Low-Density Lipoprotein (VLDL) cholesterol	60 mg/dl	44 mg/dl
Triglycerides	301 mg/dl	221 mg/dl

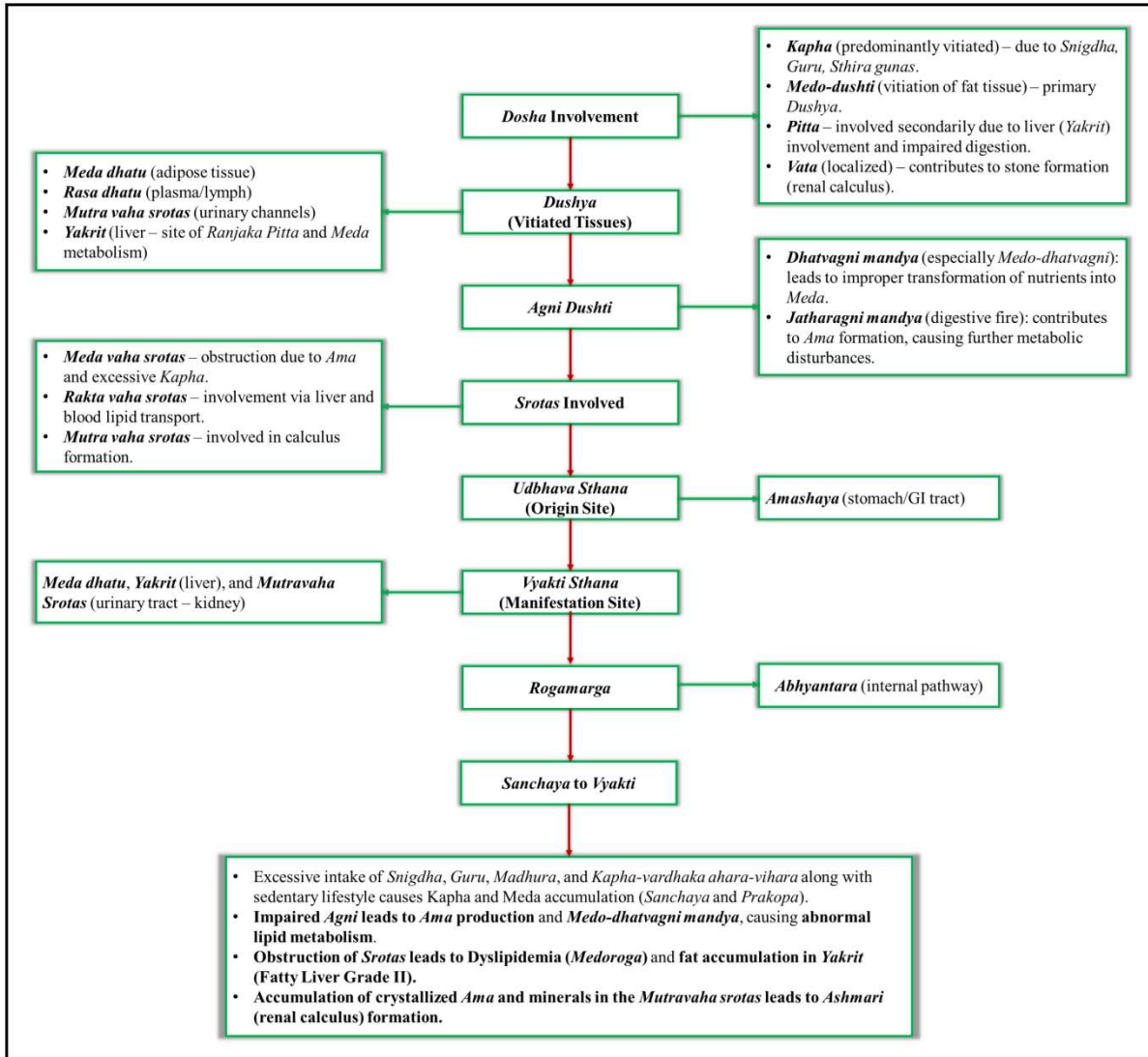
Discussion:-

A 27-year-old male with a documented history of Dyslipidemia (Medoroga) received a comprehensive Ayurvedic treatment protocol at Jeena Sikho Lifecare Limited Hospital. Pre-treatment ultrasonography revealed Grade II fatty liver and a non-obstructive 6 mm calculus in the lower calyx of the left kidney. A detailed clinical evaluation, including vital parameters, Ashtasthana Pareeksha, and supportive laboratory investigations, guided the formulation of a personalized therapeutic approach. The integrative management plan focused on Nidan Parivarjan (elimination of etiological factors), complemented by individualized dietary (Ahar), lifestyle (Vihar), and palliative Ayurvedic (Shaman Chikitsa) measures.

Nidan Parivarthan: The management of Medoroga (Dyslipidemia) focuses on eliminating causative factors that vitiate Meda Dhatu. This includes avoiding excessive intake of Snigdha, Guru, and Madhura Ahara (oily, heavy, and sweet foods), processed items, and irregular eating habits. Lifestyle modifications such as increasing physical activity, avoiding daytime sleep (Divaswapna), reducing mental stress (Chinta, Shoka, Krodha), and maintaining a disciplined routine are essential. Suppression of natural urges (Vega Dharana), irregular bowel movements, and genetic predispositions (Beeja Dosha) should also be addressed for effective prevention and control of Medoroga.

Samprapti: A comprehensive flowchart illustrating the Samprapti (pathogenesis) is provided in Figure 2. This diagram explains the Ayurvedic pathogenesis of Medoroga (dyslipidemia) and its complications. It begins with the involvement of various Doshas and Dhatus, where Kapha is predominantly vitiated due to factors like Snigdha (unctuous), Guru (heavy), and Shita (cold) qualities, leading to Medo-dushti (vitiating of fat tissue). The impaired Agni (digestive/metabolic fire), particularly Dhatvagni, causes improper transformation of nutrients, resulting in Ama (toxic metabolites) formation and disruption in lipid metabolism. The obstruction in various body channels (Srotas), including Medavah (fat tissue channels), Rakta vah (blood channels), and Mutravah (urinary channels), further aggravates the condition. The origin of pathology is mainly in the stomach and gastrointestinal tract (Amashaya), while manifestations appear in the liver (Yakrit) and kidneys (Mutravah Srotas). This leads to clinical conditions like dyslipidemia, fatty liver (Yakrit Rog), and renal calculi (Ashmari). Key causative factors include excessive intake of unwholesome foods (Snigdha, Guru, Madhura), sedentary lifestyle, and impaired metabolism, which together cause Kapha and Meda accumulation, Ama build-up, and blockage of microchannels, resulting in the disease progression. ^[14]

Figure 2: Samprapti of Medoroga



Ahar: A structured dietary and lifestyle regimen for managing Medoroga (dyslipidemia) emphasizes Pathya (wholesome) practices such as fresh, homemade food, millet-based meals, and seasonal fruits, while avoiding Apathya like refined, packed, dairy and animal foods, wheat, caffeine, supplements, and late-night eating. Hydration recommendations include medicated water, alkaline water, herbal tea, coconut and almond milk. Key grains include foxtail, barnyard, little, kodo, and browntop millets, along with pulses like Bengal gram, green gram, toor dal, and horse gram. The daily meal plan begins with tulsi-ginger water, followed by balanced meals and juices throughout the day, emphasizing digestion, metabolism, and lipid balance. [9,10,11,12,13]

Vihar: As part of the integrative treatment approach, the patient was recommended targeted lifestyle modifications to enhance overall health and support therapeutic goals. These included practicing one hour of daily meditation to encourage mental tranquility, along with 40 minutes of Sukshma Pranayama and Sukhasana to improve respiratory efficiency and musculoskeletal stability. A minimum of 6 to 8 hours of uninterrupted, quality sleep was emphasized to aid physiological repair. The regimen also incorporated a 30-minute barefoot brisk walk to stimulate circulation and metabolism, along with adherence to a consistent, disciplined daily routine to reinforce metabolic balance and therapeutic efficacy.

Chikitsa: The physician advised an integrative treatment approach centered on Shaman Chikitsa (palliative care). Following a detailed clinical evaluation, a customized medication regimen was formulated to address the patient's

specific needs. A comprehensive overview of the Ayurvedic formulations used in this case is provided in Table 8. Haritaki and Vibhitaki are the principal herbs commonly incorporated in Ayurvedic formulations. Their therapeutic efficacy is determined by their Ras Panchak – a comprehensive analysis of taste (Rasa), qualities (Guna), potency (Virya), post-digestive effect (Vipaka), and specific action (Prabhava) – as follows.^[15]

Haritaki (Terminalia chebula):-

- Haritaki is a highly revered medicinal plant in Ayurveda, classified as possessing Pancharasa (five tastes), namely Madhura (sweet), Amla (sour), Katu (pungent), Tikta (bitter), and Kashaya (astringent), with the exception of Lavana (salty) rasa.
- It exhibits Laghu (light) and Ruksha (dry) Guna (qualities), contributing to its ease of digestion and drying nature. The Veerya (potency) of Haritaki is Ushna (hot), indicating its capacity to stimulate metabolism and digestion.
- Following digestion, its Vipaka (post-digestive effect) is Madhura (sweet), which denotes nourishing and anabolic properties.
- Its Prabhava (specific action) is Tridoshaghna (pacifies all three doshas – Vata, Pitta, and Kapha), making it a versatile and foundational herb in Ayurvedic formulations for systemic detoxification, digestion, and rejuvenation.
- Haritaki exerts potent Medohara (fat-reducing), Agnideepana (digestive fire-stimulating), and Tridoshaghna (dosha-balancing) actions, making it highly effective in managing Medoroga (dyslipidemia) by enhancing metabolism, reducing excess fat, and eliminating accumulated toxins.^[16]

Vibhitaki (Terminalia bellirica):-

- Vibhitaki predominantly possesses the Kashaya (astringent) Rasa (taste), which contributes to its drying and binding effect on bodily tissues.
- It shares the Laghu (light) and Ruksha (dry) Guna (qualities), which enhance its metabolic and fat-reducing actions.
- Its Veerya (potency) is Ushna (hot), supporting digestive fire (Agni) and reducing Kapha-related imbalances.
- The Vipaka (post-digestive taste) of Vibhitaki is Madhura (sweet), denoting its restorative and nourishing effects.
- The herb exhibits Prabhava (special property) as Kaphahara (Kapha-pacifying) and Medohara (fat-reducing), making it especially beneficial in the management of metabolic disorders such as Medoroga (dyslipidemia or obesity).
- Vibhitaki offers significant Medohara (lipid-reducing), Lekhana (scraping), and Kapha-Vatahara (Kapha and Vata pacifying) properties, aiding in the effective management of Medoroga (dyslipidemia) by promoting fat metabolism, clearing srotas (body channels), and regulating lipid balance.^[17]

The patient exhibited marked improvements in both physical health and emotional well-being, underscoring the efficacy of the Ayurvedic treatment in enhancing overall quality of life. This positive clinical outcome was further validated by post-treatment laboratory assessments. Consistent progress was observed throughout the in-patient care period, reflecting a steady and favourable response to the prescribed therapeutic regimen.

Table 8: Detailed description of medicines prescribed

Medicine	Ingredients	Therapeutic Effects
Uder Vikar Janya Rog Churna	Haritaki (<i>Terminalia chebula</i>), Kutaki (<i>Picrorhiza kurroa</i>), Chiraita (<i>Swertia chirata</i>), Vibhitaki (<i>Terminalia bellirica</i>), Sharpunkha (<i>Tephrosia purpurea</i>), Guduchi (<i>Tinospora cordifolia</i>), Bhumi Amalaki (<i>Phyllanthus niruri</i>)	Yakrit Shodhan (supports liver detoxification), Agni Deepan & Pachan (enhances digestion and metabolism) and Oja Vardhan (strengthens the body's immune response).
Arogya Vati tablet	Kajan (<i>Carthamus tinctorius</i>), Loh Bhasam (<i>Ferrum</i>), Abhrak Bhasam (<i>Mica</i>), Tamra Bhasam (<i>Copper</i>), Amalaki (<i>Embllica officinalis</i>), Vibhitaki (<i>Terminalia bellirica</i>), Haritaki (<i>Terminalia chebula</i>), Chitrak (<i>Plumbago zeylanica</i>), Kutaki (<i>Picrorhiza kurroa</i>), Nimba (<i>Azadirachta indica</i>)	Prana Vardhan (improves life force), Shwas Rogahar (alleviates respiratory disorders), Ama Pachan (digests metabolic toxins) and Rogahar (disease-alleviating)
Relivion powder	Misreya (<i>Foeniculum vulgare</i>), Saindhav Lavana (Rock Salt), Shunthi (<i>Zingiber officinale</i>), Jang Haritaki (<i>Terminalia chebula</i>), Eranda oil (<i>Ricinus communis</i> – castor oil)	Agnideepan and Pachan (supports digestive health), Shodhan (aids in detoxification), Balya and Rasayan (enhances energy and vitality)
Ciro - Care	Kutaki (<i>Picrorhiza kurroa</i>), Nishoth (<i>Nysarum aristatum</i>), Kampilak (<i>Sphaeranthus indicus</i>), Patol (<i>Trichosanthes dioica</i>), Makoy (<i>Solanum nigrum</i>), Ajwain (<i>Trachyspermum ammi</i>), Punarnava (<i>Boerhavia diffusa</i>), Sounf (<i>Foeniculum vulgare</i>), Pudina (<i>Mentha piperita</i>), Gokshur (<i>Tribulus terrestris</i>), Draksha (<i>Vitis vinifera</i>), Arjun (<i>Terminalia arjuna</i>), Aloe Vera (<i>Aloe barbadensis miller</i>), Rohitak (<i>Tecomella undulata</i>), Panchkol (<i>Zingiber officinale</i> , <i>Piper longum</i> , <i>Cuminum cyminum</i> , <i>Coriandrum sativum</i> , <i>Terminalia chebula</i>), Jalodari Ras , Yakrdari Loha , Shankh Bhasam .	Yakrit Vriddhikar (improves Liver Function and Yakrit Shodhan (detoxification)
Yakrit Tonic	Rakt Punarnava (<i>Boerhavia diffusa</i>), Shweta Punarnava (<i>Boerhavia verticillata</i>), Bala (<i>Sida cordifolia</i>), Atibala (<i>Abutilon indicum</i>), Patha (<i>Cissampelos pareira</i>), Guduchi (<i>Tinospora cordifolia</i>), Chitrak (<i>Plumbago zeylanica</i>), Kakoli (<i>Roscoea procera</i>), Vasa (<i>Justicia adhatoda</i>), Nagarmotha (<i>Cyperus rotundus</i>), Ajwain (<i>Trachyspermum ammi</i>), Shunthi (<i>Zingiber officinale</i>), Krishna Marich (<i>Piper nigrum</i>), Lavang (<i>Syzygium aromaticum</i>), Methika (<i>Trigonella foenum-graecum</i>), Shweta Jeerak (<i>Cuminum cyminum</i>), Roheda Chhal (<i>Tecomella undulata</i>), Dalchini (<i>Cinnamomum verum</i>), Tejpatta (<i>Cinnamomum tamala</i>), Brihat Ela (<i>Amomum subulatum</i>), Kshudra Ela (<i>Elettaria cardamomum</i>), Jaiphal (<i>Myristica fragrans</i>), Naagkesar (<i>Mesua ferrea</i>), Kankol (<i>Piper cubeba</i>), Yashtimadhu (<i>Glycyrrhiza glabra</i>), Laliki (<i>Ardisia solanacea</i>), Madhuka (<i>Madhuca indica</i>), Shaker (<i>Saccharum officinarum</i>), Madhu (<i>Apis mellifera</i> - Honey), and Water (H_2O)	Yakrit Shodhan (liver detoxification), Raktashodhan (blood purification), Ama Pachan (digestion and elimination of toxins), Yakrit Uttejaka (liver stimulant), Pittavardhak (Pitta-increasing action) and Rasayan (rejuvenation)
Lipi Capsule	Arjun (<i>Terminalia arjuna</i>), Guggulu (<i>Commiphora wightii</i>), Resine Ext. (Resin Extract – source-specific), Haridra (<i>Curcuma longa</i>), Bhumi Amalaki (<i>Phyllanthus niruri</i>), Guduchi (<i>Tinospora cordifolia</i>), Amalaki (<i>Embllica officinalis</i>), Haritaki (<i>Terminalia chebula</i>), Vibhitaki (<i>Terminalia bellirica</i>), Shunthi (<i>Zingiber officinale</i>), Krishna Marich (<i>Piper nigrum</i>), Pippali (<i>Piper longum</i>), Yashtimadhu (<i>Glycyrrhiza glabra</i>), Punarnava (<i>Boerhavia diffusa</i>), Jatamansi (<i>Nardostachys jatamansi</i>), Rasona (<i>Allium sativum</i>), Bulb Ext. (Bulb Extract – source-specific), Akika Pishti (Agate Calx), Mukta Pishti (Pearl Calx), Abhrak Bhasam (<i>Mica</i> Calx), Shankha Bhasam (<i>Conch Shell</i> Calx).	Medohar (reduces excess fat), Lekhan (scraping), Hridaya Balya (cardioprotective), Raktashodhan (blood purifier) and Strotoshodhan (opens body channels)

Future Research Aspects:-

The future of research on Medorog (dyslipidemia) in Ayurveda offers promising avenues to integrate classical wisdom with modern scientific validation. Key areas of exploration include:

1. Standardization of Ayurvedic Formulations:-

There is a need for systematic clinical trials to standardize poly – ayurvedic formulations like Triphala, Guggulu, and Arjuna-based preparations, validating their lipid-lowering efficacy, safety profile, and pharmacokinetics. ^[18]

2. Mechanistic Studies:-

Investigating the molecular mechanisms of classical ayurvedic herbs such as Haritaki, Vibhitaki, Guduchi, Bhumi Amalaki, and Guggulu can provide insights into their role in lipid metabolism, gut microbiota modulation, and anti-inflammatory actions. ^[19]

3. Biomarker Identification:-

Future research can focus on identifying specific Ayurvedic and biochemical biomarkers that reflect Meda Dhatu Dushti (vitiation of adipose tissue) and its correlation with lipid profiles, obesity, and metabolic syndrome. ^[20]

4. Personalized Medicine (Prakriti-Based Approach):-

Studying the impact of Prakriti (individual constitution) on the manifestation and treatment response in Medoroga can help develop personalized Ayurvedic interventions tailored to Dosha predominance. ^[21]

5. Ayurvedic Lifestyle Interventions:-

Long-term studies on the effectiveness of Ayurvedic Ahara (diet), Vihara (lifestyle), and Dinacharya (daily regimen) in preventing and managing dyslipidemia can provide preventive strategies aligned with modern public health goals. ^[22]

6. Integrative Models:-

Developing integrative models that combine Ayurvedic treatment protocols with modern lipid management could enhance patient outcomes, reduce drug dependency, and improve long-term metabolic health. ^[22]

7. Digital Health and Ayurveda:-

Leveraging digital platforms and AI-based tools to monitor Medoroga progression and treatment response through Ayurvedic parameters could revolutionize preventive and therapeutic approaches. ^[22]

Conclusion:-

The presented case of Medoroga (dyslipidemia) in a 27-year-old male, complicated by Yakrit Roga (Grade II fatty liver) and Ashmari (renal calculus), highlights the efficacy of a comprehensive Ayurvedic management approach rooted in classical principles. The clinical outcome demonstrates that targeted interventions such as Nidana Parivarjana (elimination of causative factors), Pathya-Apathya (dietary regulation), and Shamana Chikitsa (palliative therapy) can successfully correct Medo-Dhatvagni Mandya (impaired lipid metabolism), clear Srotorodha (obstruction of microchannels), and restore Dosha balance. Improvement in both objective parameters (ultrasound findings) and subjective well-being underscores the holistic benefits of Ayurveda in managing metabolic disorders. This case reaffirms that Ayurvedic principles, when applied systematically, offer a sustainable, individualized, and non-invasive strategy for managing Santarpanajanya Vyadhi (diseases of over-nutrition), including dyslipidemia and its associated complications.

Ultrasound improvements:

- The liver echotexture showed marked improvement, with normalization of echogenicity and absence of fatty infiltration or fibrosis, indicating resolution of Fatty Liver Grade II.
- The 6 mm renal calculus in the lower calyx of the left kidney resolved completely, with kidney imaging returning to normal and no signs of obstruction or hydronephrosis.
- The final diagnostic impression confirmed the elimination of focal lesions and fatty changes in the liver, alongside normal elastography findings, reflecting substantial recovery of hepatic structure and function.

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