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Date: 12th January, 2026

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Subject: Intimation under Regulation 30 of SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015 – Publication of Case study and Research Article.

Dear Sir/Madam,

Pursuant to Regulation 30 of the SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015, we wish to inform you that following academic publications, namely case study and a Research Article, have been published in the ***European Journal of Pharmaceutical*** and ***Medical Research and International Journal of Advanced Research (IJAR).*** These publications have been authored by medical professionals associated with **Jeena Sikho Lifecare Limited**, including our Managing Director, senior consultants, and Ayurvedic experts.

These publications reflect the Company's continued commitment towards advancement of Ayurvedic research and promotion of evidence-based clinical practices. The details of the publications are as under:

S. No.	Type	Name
1.	Case Study	Ayurvedic Management of Type 2 Diabetes Mellitus: A Case Study
2.	Research Article	Integrative Hope in Advanced Chronic Kidney Disease: An Ayurvedic Case Approach

Copies of the articles are enclosed as ***Annexures A and B*** for your records.

This is for your kind information and record.

Thanking you,
Yours faithfully,

For Jeena Sikho Lifecare Limited

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AYURVEDIC MANAGEMENT OF TYPE 2 DIABETES MELLITUS: A CASE STUDY

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ABSTRACT

Type 2 Diabetes Mellitus (T2DM) is a chronic metabolic disorder marked by persistent hyperglycemia, often accompanied by comorbidities such as dyslipidemia and exocrine pancreatic insufficiency, contributing to metabolic imbalance and complications. This case study presents a 45-year-old female with T2DM, who visited Jeena Sikho Lifecare Limited Hospital, Ambala, India, on April 11, 2025. She had a history of multiple abdominal surgeries, including hysterectomy, cholecystectomy, splenectomy, and distal pancreatectomy. Her symptoms included general weakness, reduced appetite, and elevated blood sugar levels. A comprehensive *Ayurvedic* evaluation revealed features of *Agnimandya* (weakened digestion), *Srotorodha* (channel obstruction), and *Meda Dhatu Dushti* (fat tissue imbalance), correlating with the clinical findings of hyperlipidemia and pancreatic enzyme insufficiency. *Ayurvedic* management involved *Deepan-Pachan* (digestive stimulation), *Srotoshodhana* (channel cleansing) and *Pathya-Apathya* (dietary and lifestyle regulation). Following treatment, the patient showed marked clinical improvement: blood glucose reduced from 159 mg/dl to 129 mg/dl, HbA_{1c} from 7.3% to 6.4%, fecal elastase improved from 102 µg/g to 694 µg/g, and lipid profile, including cholesterol and triglycerides, significantly normalized. Hematological values also stabilized, indicating improved systemic health. This case highlights the effectiveness of individualized *Ayurvedic* therapy in managing complex metabolic disorders such as T2DM with associated pancreatic and lipid dysfunction, addressing the root causes and promoting sustained metabolic balance.

KEYWORDS: *Agnimandya*, *Ayurveda*, Dyslipidemia, Fecal Pancreatic Elastase, *Madhumeh*, Type 2 Diabetes Mellitus.

INTRODUCTION

Type 2 diabetes mellitus (T2DM) is a widespread chronic metabolic disorder marked by persistent hyperglycemia resulting from insulin resistance and/or inadequate insulin secretion.[1] It is commonly associated with a range of comorbidities, among which dyslipidemia is particularly significant due to its contribution to cardiovascular disease, the leading cause of mortality in diabetic patients.[2] Dyslipidemia in T2DM is characterized by elevated levels of total cholesterol, low-density lipoprotein (LDL), triglycerides, and non-HDL cholesterol.[3] According to studies, a substantial proportion of T2DM patients show lipid abnormalities, with over 60% presenting with raised LDL and more than 50% with high triglyceride levels.[4] Furthermore, emerging research highlights the role of remnant cholesterol and inflammatory markers in exacerbating metabolic risk, even when conventional lipid profiles appear normal.[5] In elderly populations, the so-called "cholesterol paradox", wherein lower cholesterol levels are paradoxically linked to worse outcomes, further complicates cholesterol management in T2DM.[6]

In addition to lipid imbalance, growing evidence has shown a strong correlation between T2DM and exocrine pancreatic dysfunction, as assessed by fecal pancreatic elastase-1 (FE-1) levels.[7] FE-1 is a non-invasive biomarker used to evaluate pancreatic exocrine activity, with values below 200 µg/g indicating insufficiency.[8] Research indicates that a significant proportion of T2DM patients exhibit low FE-1 levels, suggesting concurrent exocrine pancreatic insufficiency (PEI).[9] This dysfunction may impair the digestion and absorption of dietary fats and cholesterol, potentially contributing to malnutrition and altered lipid profiles.[10] FE-1 levels have also been found to negatively correlate with fasting blood glucose and HbA_{1c}, and positively correlate with insulin reserve (C-peptide), underscoring its relevance in the broader metabolic landscape of diabetes.[11] Despite its diagnostic value, interpreting FE-1 in isolation may be misleading, as fat malabsorption may not always manifest clinically in all patients, pointing to a complex interplay between digestive enzymes, nutrient assimilation, and systemic metabolism.[12]

From an *Ayurvedic* standpoint, the interconnected dysfunctions of blood sugar regulation, cholesterol imbalance, and digestive enzyme insufficiency can be understood through the lens of *Agni* (Metabolic fire), *Dosha* imbalance, and *Dhatu* metabolism.[13] T2DM corresponds to *Prameha*, a *Kapha-Medaja Vyadhi* (disease rooted in *Kapha* and *Meda* vitiation) characterized by improper digestion, tissue-level metabolic derangement, and excessive accumulation of unprocessed nourishment.[14] Similarly, impaired fat digestion and lipid accumulation correspond to *Medoroga*, arising from *Meda Dhatvagni Mandya* (impaired fat tissue metabolism) and *Ama Sanchaya* (accumulation of toxic byproducts due to weak *Agni*).[15] Reduced pancreatic function, as reflected by low FE-1, can be interpreted as *Agnyashaya Dushti* (disturbance in the function of digestive organs) and *Mandagni*, resulting in *Srotorodha* (blockage of bodily channels) and deranged nutrient transformation.[16] The *Samprapti Ghataka*[17,18,19,20] is mentioned in **Table 1**.

Table 1: The *Samprapti Ghataka.*

Samprapti Ghataka	**Details (Sanskrit with English)**
Dosha **(Bio-energetic factors)**	*Kapha* (phlegm/hypometabolic), *Pitta* (bile/enzymatic), *Vata* (air/neuro-metabolic – in chronic cases)
Dushya **(Affected tissues)**	*Rasa* (plasma/lymph), *Meda* (fat/adipose tissue), *Mamsa* (muscle), *Majja* (marrow/nerve tissue), *Shukra* (reproductive tissue), *Ojas* (vital essence/immunity)
Agni **(Digestive fire)**	*Mandagni* (low digestive/metabolic fire), especially *Jatharagni* (primary digestive fire) and *Dhatvagni* (tissue-level metabolic fire) of *Rasa* (plasma) and *Meda* (fat)
Ama **(Metabolic toxins)**	*Present* – due to incomplete digestion and absorption
Srotas **(Body channels)**	*Rasavaha* (channels of plasma), *Medovaha* (channels of fat), *Annavaha* (channels of food), *Pittavaha* (channels of bile/enzymes), *Purishavaha* (channels of feces)
Udbhav Sthan **(Origin site)**	*Amashaya* (stomach) / *Grahani* (duodenum/small intestine – functional digestive zone)
Sanchar Sthan **(Path of spread)**	*Rasa Dhatu* (plasma/lymph) and *Meda Dhatu* (fat/adipose), via affected *Srotas* (channels)
Vyakti Sthan **(Manifestation site)**	*Agnyashaya* (conceptual seat of pancreas), *Meda Dhatu* (fat), *Dhamani* (blood vessels)
Adhisthan **(Seat of disease)**	*Sarva Sharira* (whole body/systemic involvement), especially metabolic and endocrine organs
Rog Marg **(Pathway of disease)**	*Abhyantara Marga* (internal disease pathway)
Samprapti Type (Pathogenesis type)	*Sama* (with toxins), *Santarpanajanya* (due to overnutrition), *Agnimandyajanya* (due to weak digestion), *Srotorodhajanya* (due to channel blockage)

The treatment begins with *Deepan* and *Pachan* to rekindle digestive capacity and prevent further formation of *Ama*.[21] Alongside, attention is given to clearing obstructions in bodily channels (*Srotoshodhana*) to ensure the proper flow of nutrients and metabolic waste.[22] Therapies are selected to regulate fat and sugar metabolism by pacifying the aggravated *Kapha* and balancing *Pitta* and *Vata*, depending on the individual's constitution and stage of disease.[23] Cleansing procedures like *Virechana* (therapeutic purgation) and *Basti* (medicated enema) may be employed to expel deep-seated imbalances, especially those affecting the gastrointestinal and metabolic systems.[24] Dietary guidance is a cornerstone of treatment, emphasizing

light, easily digestible foods that support *Agni* and discourage the accumulation of *Meda* (fat tissue).[25] Lifestyle modifications including regular physical activity, stress management, and proper sleep hygiene are also integral.[26] This holistic approach aims not just to manage symptoms but to address the underlying dysfunctions in digestion, metabolism, and tissue nourishment that contribute to reduced pancreatic function, poor glycemic control, and lipid imbalances.

OBJECTIVE

To assess the effectiveness of *Ayurvedic* treatment in managing T2DM with low fecal pancreatic elastase and high cholesterol levels.

MATERIALS AND METHODS

I. Case Report

A 45-year-old female diagnosed with Type 2 Diabetes Mellitus (T2DM) visited Jeena Sikho Lifecare Limited Hospital, Ambala, India, on April 11, 2025. A comprehensive assessment was conducted, including detailed medical history, physical examination, and diagnostic tests. She had a past surgical history of hysterectomy, cholecystectomy, splenectomy, and distal pancreatectomy. There was no significant family history or any addiction. She presented with complaints of general weakness and reduced appetite. She was also diagnosed with Hyperlipidemia. The *Ashtasthana Pareeksha* during the first visit are mentioned in **Table 2.** The basic vitals during the visits are mentioned in **Table 3.** The blood test results during the treatment period are shown in **Table 4.** The cholesterol test results are mentioned in **Table 5**, fecal elastase results are mentioned in **Table 6 and** HbA_{1c} is mentioned in **Table 7.**

Table 2: The *Ashtasthana Pareeksha* during the visits.

Parameter	11-04-2025	06-05-2025	19-06-2025
***Nadi* (Pulse)**	*Vataj Pittaj*	*Vataj Pittaj*	*Vataj Pittaj*
***Mala* (Stool)**	*Saam* (Coated)	*Avikrit* (Normal)	*Avikrit* (Normal)
***Mutra* (Urine)**	*Safena* (Frothy)	*Safena* (Frothy)	*Avikrit* (Normal)
***Jiwha* (Tongue)**	*Saam* (Coated)	*Avikrit* (Normal)	*Avikrit* (Normal)
***Shabda* (Voice)**	*Spashta* (Clear)	*Spashta* (Clear)	*Spashta* (Clear)
***Sparsha* (Touch)**	*Anushna sheet* (Normal)	*Anushna sheet* (Normal)	*Anushna sheet* (Normal)
***Drik* (Eye)**	*Avikrit* (Normal)	*Avikrit* (Normal)	*Avikrit* (Normal)
***Akriti* (Physique)**	*Alpasharirata* (Underweight)	*Alpasharirata* (Underweight)	*Alpasharirata* (Underweight)

Table 3: The Basic vitals during the visits.

Parameter	Blood pressure (mmHg)	Weight (Kg)	Blood Sugar
11-04-2025	110/70 mmHg	51 Kg	159 mg/dl
06-05-2025	100/70 mmHg	51 Kg	129 mg/dl
19-06-2025	100/60 mmHg	51 Kg	136 mg/dl

Table 4: The blood test results during the treatment period (Fig 1).

Parameter	27-05-2024	15-04-2025	11-06-2025
Hemoglobin	14.34 mg/dl	13.83 mg/dl	13.57 mg/dl
RBC	4.66 mill/mm3	4.32 mill/mm3	4.24mill/mm3
TLC	**10.70 thou/mm3**	8.44 thou/mm3	8.34 thou/mm3
Platelets	348 thou/mm3	**519 thou/mm3**	375 thou/mm3

Table 5: The cholesterol test results during the treatment period (Fig 2).

Parameter	27-05-2024	15-04-2025	11-06-2025
Cholesterol, Total	**217 mg/dl**	157 mg/dl	177 mg/dl
Triglycerides	**439 mg/dl**	**220 mg/dl**	**246 mg/dl**
HDL Cholesterol	**36.40 mg/dl**	**44.60 mg/dl**	**43.80 mg/dl**
LDL Cholesterol, Calculated	-	68.40 mg/dl	84 mg/dl
VLDL Cholesterol,Calculated	-	**44 mg/dl**	**49.20 mg/dl**
Non-HDL Cholesterol	**181 mg/dl**	112 mg/dl	**133 mg/dl**

Table 6: The fecal elastase results (Fig 3).

Date	Fecal Elastase
26-06-2024	**102 µg/g stool**
21-05-2025	694 µg/g stool
13-06-2025	640 µg/g stool

Table 7: The HbA1c results (Fig 4).

Date	HbA1c
27-05-2024	7.3%
15-04-2025	6.4%
11-06-2025	6.4%

II. Treatment protocol

I. Diet Plan

An accurately designed *Ayurveda* and Disciplined and Intelligent Person's (DIP) Diet was provided to the patient to complement the *Ayurvedic* treatments administered for T2DM with low fecal pancreatic elastase and high cholesterol levels at Jeena Sikho Lifecare Limited[27]:

In traditional texts, various food items suitable for individuals with these conditions are described[28,29]:

***Ahar* [Table 8].**

Pathya	***Apathya***
• *Mudga Yusha* (green gram soup), *Laja Manda* (thin rice gruel), *Yavagu* (rice porridge with herbs like Musta or Jeeraka) • Steamed vegetables like ash gourd, ridge gourd, snake gourd • Barley (*Yava*), millets (except those too drying like *Bajra* in *Vata* dominant cases) • Whole grains in moderation • Avocado, flaxseeds, walnuts (contain omega-3) • *Jamun* (Syzygium cumini), *Amla* (Emblica officinalis), pomegranate (in moderation), guava • *Jeeraka* (cumin), Ajwain (carom), *Saindhava lavana, Triphala* • *Gudmar* (Gymnema sylvestre), Haridra (turmeric), *Daruharidra*, *Katuki* (Picrorhiza kurroa), *Bilva* leaves.	• High-fat and fried foods: • Deep-fried snacks, fast food, red meat • High glycemic index foods: • White rice, potatoes, refined wheat products, sugar, jaggery, honey • Dairy: • Especially heavy milk products like paneer, cheese, curd at night • Carbonated drinks & processed foods • Cold and refrigerated food items • Especially black gram, rajma, chana.

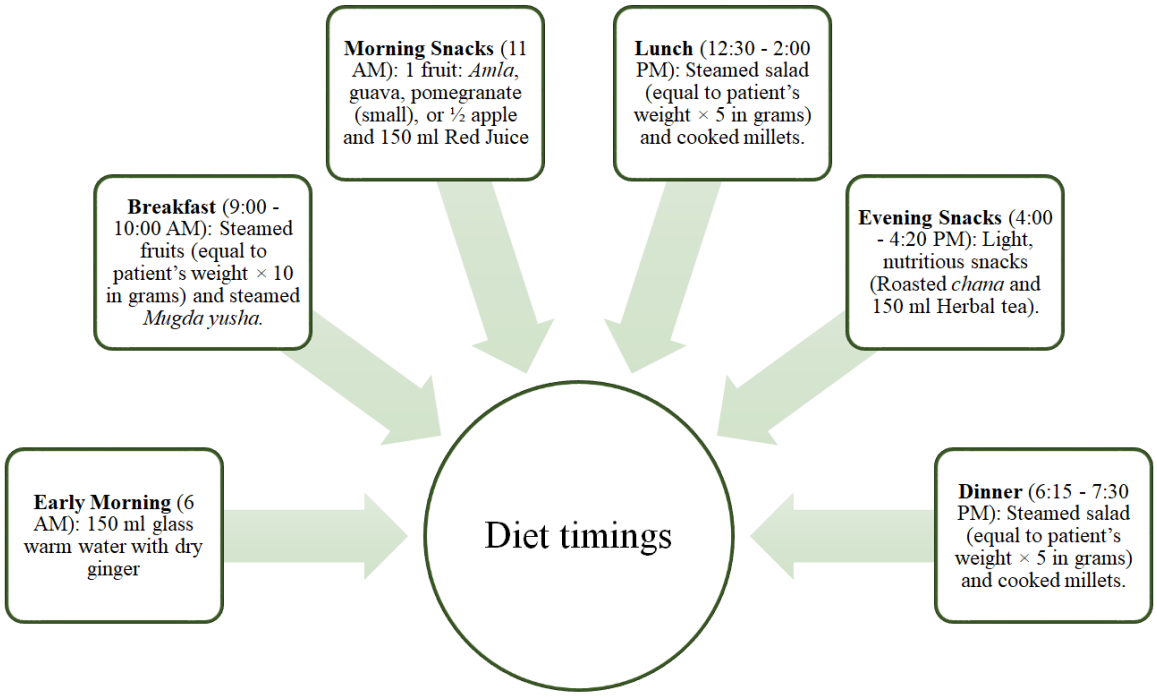
Dietary Conduct

- It is advised not to consume food after 8 PM. While eating, take small morsels and chew each bite thoroughly—about 32 times—to aid digestion and Cook only in steel utensils to preserve nutritional value.

***Jalapana* [Table 9].**

Pathya	***Apathya***
• Warm water (*Ushnodaka*). • Cumin water (*Jeera Jal*) – 1–2 glasses/day. • Coriander water (*Dhaniya Jal*). • Barley water (*Yavambu*) – 1–2 glasses/day. • Amla juice (diluted) – 20–30 ml in 100 ml water, 3–4 times/week. • Herbal infused water (with *Musta*, *Ajwain, Hing*). • Buttermilk (*Takra*) with roasted cumin or *Trikatu*. • *Triphala* infusion or decoction – at bedtime or alternate days. • Tender coconut water – 100 ml, 1–2 times/week.	• Cold or refrigerated water. • Sweetened beverages (soft drinks, packaged juices). • Fruit juices (even fresh). • Milkshakes and smoothies with banana/mango. • Alcohol. • Excessive tea/coffee.

Meal Timing and Structure (Fig 5)[31]



Fasting

- Fast once a week.[31]

Special Instructions

- Sit in gentle sunlight for one hour in the morning and evening, keeping your feet soaked in warm water. Maintain a meditative state in *Gyan Mudra*, softly chanting the seed sounds: LUM, VUM, RUM, YUM, HUM, OM, and AUM to harmonize internal energy centers.
- Before eating or drinking, take a moment to express gratitude to the divine, acknowledging the nourishment with reverence.

II. Lifestyle Recommendations [Table 10]

Pathya	*Apathya*
• Wake up early (*Brahma Muhurta*: ~4:30–5:30 AM) • Oral hygiene & oil pulling (*Gandusha*) • Mild exercise or yoga (30–45 min daily) – Brisk walking, Surya *Namaskar*, or light *asanas* (like *Pavanamuktasana*, *Ardha Matsyendrasana*, *Vajrasana* after meals). • *Pranayama* and meditation (15–20 min daily) – Especially *Nadi Shodhana*, *Bhramari*, and *Anuloma Viloma*. • Bath with warm water (*Snana*). • Avoid overeating; leave 1/4 of stomach empty. • Sit in *Vajrasana* after meals for 5–10 minutes to aid digestion. • Avoid emotional eating or late-night snacking. • Light dinner before 8 PM.	• Sedentary lifestyle or prolonged sitting. • Daytime naps or oversleeping. • Late dinners or irregular eating patterns. • Cold showers or exposure to cold. • Overexertion or extreme fasting. • Excessive alcohol or smoking.

Recommended *Yoga Asanas*

Surya Namaskar, Ardha Matsyendrasana, Pavana muktasana, Vajrasana, Bhujangasana, Dhanurasana, Paschimottanasana, Trikonasana, Setu Bandhasana, Shavasana and Pranayama.

III. Medicinal Interventions

The *Ayurvedic* treatment employed in this case included Prameh Har Powder, DM+ Syrup, Dhatu Poshak Capsule, Yakrit Shoth Har Vati, Divya Shakti Powder, Dr. Immune tablet, 32 Herbs Tea, Dr. Nabhi oil, Dr. Tooth Oil, Dr. Madhumeh, Blood Purifier Syrup and Dr. Diab Tablet. The medications prescribed for the patient during the treatment is outlined in **Table 11.** The details of the medicine prescribed are described in **Table 12.**

Table 11: The medications prescribed for the patient during the treatment.

Date	Medicines	Dosage with *Anupana*
11-04-2025	Prameh Har Powder	A teaspoon BD *(Adhobhakta* with *koshna jala* - After meal with lukewarm water)
	DM+ Syrup	7.5 ml BD (*Adhobhakta* with *sama matra koshna jala*- After meal with equal amount of lukewarm water)
	Dhatu Poshak Capsule	1 CAP BD (*Adhobhakta* with *koshna jala*)
	Yakrit Shoth Har Vati	1 TAB BD (*Adhobhakta* with *koshna jala*)
	Vata, Pitta & Kapha Care Package	20 days
06-05-2025	Prameh Har Powder	A teaspoon BD *(Adhobhakta* with *koshna jala)*
	DM+ Syrup	7.5 ml BD (*Adhobhakta* with *sama matra koshna jala)*
	Dhatu Poshak Capsule	1 CAP BD (*Adhobhakta* with *koshna jala*)
19-06-2025	Dhatu Poshak Capsule	1 CAP BD (*Adhobhakta* with *koshna jala*)
	Dr. Madhumeh	1 TAB BD (*Adhobhakta* with *koshna jala*)
	Dr. Diab Tablet	1 TAB BD (*Adhobhakta* with *koshna jala*)
	Blood Purifier	7.5 ml BD (*Adhobhakta* with *sama matra koshna jala)*

Table 12. The details of the medicine prescribed during the treatment

Medicine	Ingredients	Therapeutic Effects
Prameh Har Powder	***Kutaki*** *(Picrorhiza kurroa),* ***Chiraita*** *(Swertia chirata),* ***Neem*** *(Azadirachta indica),* ***Karela*** *(Momordica charantia),* ***Rasonth*** *(Berberis aristata),* ***Imli Beej*** *(Tamarindus indica),* ***Kala Namak*** *,* ***Giloy*** *(Tinospora cordifolia),* ***Sonth*** *(Zingiber officinale),* ***Babool Chhaal*** *(Vachellia nilotica),* ***Sarpgandha*** *(Rauvolfia serpentina),* ***Trivang Bhasm*** *,* ***Yashad Bhasm*** *,* ***Revend Chinni*** *(Rheum emodi),* ***Sodhit Guggulu*** *(Commiphora mukul),* ***Methi*** *(Trigonella foenum-graecum),* ***Jamun*** *(Syzygium cumini),* ***Babool Fruit*** *(Vachellia nilotica),* ***Karanj*** *(Millettia pinnata),* ***Shilajeet*** *,* ***Haldi*** *(Curcuma longa),* ***Harad*** *(Terminalia chebula),* ***Inderjaun*** *(Holarrhena antidysenterica),* ***Vanshlochan*** *(Bambusa arundinacea),* ***Bahera*** *(Terminalia bellirica),* ***Amla*** *(Phyllanthus emblica),* ***White Musli*** *(Chlorophytum borivilianum),* ***Gurmar*** *(Gymnema sylvestre).*	*Pramehaghna* (anti-diabetic), *Raktashodhak* (blood purifier), *Deepan* (digestive stimulant), *Pachan* (digestive), *Rasayana* (rejuvenative), *Medohar* (fat-reducing), *Shoth har* (anti-inflammatory), *Mutral* (diuretic)
DM+ Syrup	***Kumari*** *(Aloe vera),* ***Papita*** *(Carica papaya),* ***Giloy*** *(Tinospora cordifolia),* ***Saptrangi*** *(Salacia oblonga),* ***Karela*** *(Momordica charantia),* ***Jamun*** *(Syzygium cumini),* ***Neem*** *(Azadirachta indica),* ***Gurmar*** *(Gymnema sylvestre),* ***Kalmegh*** *(Andrographis paniculata),* ***Arjun*** *(Terminalia arjuna),* ***Pipal*** *(Ficus religiosa),* ***Dalchini*** *(Cinnamomum verum),* ***Tulsi*** *(Ocimum sanctum),* ***Vijaysaar*** *(Pterocarpus marsupium),* ***Ashwagandha*** *(Withania somnifera).*	*Madhumeha Nashaka* (Anti-diabetic), *Kapha-Vata Shamaka* (Balances *Kapha* and *Vata doshas*), *Agnivardhaka* (Enhances digestive fire), *Rasayana* (Rejuvenative), *Shoth har* (Anti-inflammatory), *Balya* (Strength-promotin), *Medohara* (Reduces excess fat), *Prameha Nashak* (Removes urinary disorders related to diabetes)
Dhatu Poshak Capsule	***Chuna Shuddh, Shankh Bhasm, Mukta Shukti, Prawal Pishti, Kapardika and Loh***	*Dhatuposhaka* (Tissue nourishing), *Rasayana* (Rejuvenative), *Balya* (Strengthening), *Srotoshodhak* (Channel cleansing), *Vata-Pitta shaman (Vata* and *Pitta* balancing), *shodhak* (Detoxifier), *Agni Deepan* (Digestive fire stimulant), *Lekhana* (Scraping)

Yakrit Shoth Har Vati	***Punarnava*** *(Boerhavia diffusa),* ***Kalimirch*** *(Piper nigrum),* ***Pippali*** *(Piper longum),* ***Vayavidanga*** *(Embelia ribes),* ***Devdaru*** *(Cedrus deodara),* ***Kutha Haldi*** *(Picrorhiza kurroa),* ***Chitrak*** *(Plumbago zeylanica),* ***Harad*** *(Terminalia chebula),* ***Bahera*** *(Terminalia chebula, Terminalia bellirica),* ***Amla*** *(Emblica officinalis),* ***Danti*** *(Baliospermum montanum),* ***Chavya*** *(Piper chaba),* ***Indra Jon*** *(Taraxacum officinale),* ***Pippla Mool*** *(Piper longum),* ***Motha Kalajira*** *(Nigella sativa),* ***Kayphal*** *(Myrica esculenta),* ***Kutaki*** *(Picrorhiza kurroa),* ***Nisoth*** *(Operculina turpethum),* ***Saunth*** *(Zingiber officinale),* ***Kakd Singhi*** *(Cucumis*	*Raktashodhak* (Blood purifier), *Deepan* (Appetizer), *Pachan* (Digestant), *Shoth har* (Anti-inflammatory), *Vata-kapha shamaka* (*Dosha*- balancer), *Rasayana* (Rejuvenator), *Ojovardhaka* (Immunity enhancer)
Divya Shakti Powder	***Trikatu*** *(Zingiber officinale, Piper nigrum, Piper longum),* ***Triphala*** *(Emblica officinalis, Terminalia chebula, Terminalia belliric),* ***Nagarmotha*** *(Cyperus rotundus),* ***Vay Vidang*** *(Embelia ribes),* ***Chhoti Elaichi*** *(Elettaria cardamomum),* ***Tej Patta*** *(Cinnamomum tamala),* ***Laung*** *(Syzygium aromaticum),* ***Nishoth*** *(Operculina turpethum),* ***Sendha Namak*** *,* ***Dhaniya*** *(Coriandrum sativum),* ***Pipla Mool*** *(Piper longum root),* ***Jeera*** *(Cuminum cyminum),* ***Nagkesar*** *(Mesua ferrea),* ***Amarvati*** *(Achyranthes aspera),* ***Anardana*** *(Punica granatum),* ***Badi Elaichi*** *(Amomum subulatum),* ***Hing*** *(Ferula assafoetida),* ***Kachnar*** *(Bauhinia variegata),* ***Ajmod*** *(Trachyspermum ammi),* ***Sazzikhar Pushkarmool*** *(Inula racemosa),* ***Mishri*** *(Saccharum officinarum)*	*Ojakshaya* (Loss of vitality/immunity), *Agnimandya* (Low digestive fire), *Chakshukshaya* (Weak vision), *Deepan* (Appetizer), *Rasayana* (Rejuvenator)
Dr. Immune tablet	***Kesar*** *(Crocus sativus),* ***Shuddh Kuchla*** *(Strychnos nux-vomica),* ***Ashwagandha Ext.*** *(Withania somnifera),* ***Shatawari Ext.*** *(Asparagus racemosus),* ***Pipali*** *(Piper longum),* ***Tulsi*** *(Ocimum sanctum),* ***Laung*** *(Syzygium aromaticum),* ***Chhoti Elaichi*** *(Elettaria cardamomum),* ***Sonth*** *(Zingiber officinale),* ***Haldi*** *(Curcuma longa),* ***Loh Bhasma*** *(Ferrum),* ***Swaran Makshik Bhasma*** *(Chalcopyrite),* ***Mukta Shukti Bhasma*** *(Pinctada margaritifera)*	*Ojas Vardhak* (Vitality enhancer), *Rasayana* (Rejuvenator), *Vyadhi Kshamatva* (Immunity booster), *Shoth har* (Anti-inflammatory), *Raktashodhak* (Blood purifier), *Deepan* (Appetizer), *Balya* (Strength promoter)
32 Herbal Tea	***Gauzaban*** *(Echium amoenum),* ***Kulanjan*** *(Alpinia galanga),* ***Chhoti Elaichi*** *(Elettaria cardamomum),* ***Laung*** *(Syzygium aromaticum),* ***Badi Elaichi*** *(Amomum subulatum),* ***Badiyan Khtay*** *(Illicium verum),* ***Banafsha*** *(Viola odorata),* ***Jufa*** *(Clerodendrum serratum),* ***Ashwagandha*** *(Withania somnifera),* ***Mulethi*** *(Glycyrrhiza glabra),* ***Punarnava*** *(Boerhavia diffusa),* ***Brahmi*** *(Bacopa monnieri),* ***Chitrak*** *(Plumbago zeylanica),* ***Kali Mirch*** *(Piper nigrum),* ***Adoosa*** *(Adhatoda vasica),* ***Saunf*** *(Foeniculum vulgare),* ***Shankh Pushp*** *(Evolvulus alsinoides),* ***Tulsi*** *(Ocimum sanctum),* ***Arjun*** *(Terminalia arjuna),* ***Motha*** *(Cyperus rotundus),* ***Senaye*** *(Cuscuta reflexa),* ***Sonth*** *(Zingiber officinale),* ***Majeeth*** *(Rubia cordifolia),* ***Sarfoka*** *(Sphaeranthus indicus),* ***Dalchini*** *(Cinnamomum verum),* ***Gulab*** *(Rosa spp.),* ***Green Tea*** *(Camellia sinensis),* ***Giloy*** *(Tinospora cordifolia),* ***Tej Patta*** *(Cinnamomum tamala),* ***Lal Chandan*** *(Pterocarpus santalinus),* ***White Chandan*** *(Santalum album),* ***Pudina*** *(Mentha spicata)*	*Deepan* (Digestive stimulant), *Pachan* (Digestion or digestive process).
Dr. Nabhi oil	***Amla*** *(Phyllanthus emblica),* ***Haritaki*** *(Terminalia chebula),* ***Bahera*** *(Terminalia bellerica),* ***Almond*** *(Prunus dulcis),* ***Jaiphal*** *(Myristica fragrans),* ***Ajwain*** *(Trachyspermum ammi),* ***Alsi*** *(Linum usitatissimum),* ***Long*** *(Syzygium aromaticum),* ***Camphor*** *(Cinnamomum camphora),* ***Olive*** *(Olea europaea),* ***Coconut*** *(Cocos nucifera),* ***Lemongrass*** *(Cymbopogon citratus),* ***Kali Jeeri*** *(Nigella sativa),* ***Ajmod*** *(Apium graveolens),* ***Guggul*** *(Commiphora wightii),* ***Giloy*** *(Tinospora cordifolia),* ***Chirayata*** *(Swertia chirata),* ***Kalonji*** *(Nigella sativa),* ***Katu Taila*** *(Sesamum indicum),* ***Taramira*** *(Eruca sativa),* ***Til Tailam*** *(Sesamum indicum).*	*Agnideepan* (Stimulates digestive fire), *Vata-nashaka* (Vata pacifying), *Rasayana* (Rejuvenative), *Ojovardhak* (Enhances vitality or strengthens immunity), *Chakra sthirikara* (Stabilizes or strengthens the energy centers).

Dr. Tooth Oil	**Clove oil, Sat ajwain, peppermint and glycerine**	*Danta-māṃsa-bala-vardhak* (strengthens teeth and gums), *Krimighna* (antimicrobial), and *Durgandg -har*
Dr. Madhumeh	***Gudmar*** *(Gymnema sylvestre),* ***Methi*** *(Trigonella foenum-graecum),* ***Giloy*** *(Tinospora cordifolia),* ***Neem*** *(Azadirachta indica),* ***Haritaki*** *(Terminalia chebula),* ***Karela*** *(Momordica charantia),* ***Chiraita*** *(Swertia chirayita),* ***Jamun*** *(Syzygium cumini),* ***Vijaysar*** *(Pterocarpus marsupium),* ***Daruhaldi*** *(Berberis aristata),* ***Karanj*** *(Pongamia pinnata)*	*Prameha nashak* (Anti-diabetic), *Deepan* (Appetizer), *Pachan* (Digestant), *Rasayana* (Rejuvenator), *Vatahara (Vata* pacifier)
Blood Purifier Syrup	***Khair Chaal*** *(Acacia catechu),* ***Babchi*** *(Psoralea corylifolia),* ***Devdaru*** *(Cedrus deodara),* ***Daru Haldi*** *(Curcuma aromatica),* ***Haritaki*** *(Terminalia chebula),* ***Bhera*** *(Terminalia bellerica),* ***Amla*** *(Phyllanthus emblica),* ***Mahamajishtha*** *(Rubia cordifolia),* ***Dhamasa*** *(Gmelina arborea),* ***Sariva*** *(Hemidesmus indicus),* ***Amba Haldi*** *(Curcuma amada),* ***Kutki*** *(Picrorhiza kurroa),* ***Chiraita*** *(Swertia chirata),* ***Rasont*** *(Ruta graveolens),* ***Satyanashi*** *(Cissampelos pareira),* ***Madhu*** *(Honey), and* ***Shaker*** *(Saccharum officinarum)*	*Raktashodhak* (Blood purifier), *Shoth har* (Anti-inflammatory), *Deepan* (Digestive stimulant), *Rasayana* (Rejuvenator), *Vata-Pitta Shaman* (Pacifier of *Vata* and *Pitta doshas), Kushtahara* (Anti-skin disease)
Dr. Diab Tablet	***Nimoli*** *(Azadirachta indica),* ***Gudmar*** *(Gymnema sylvestre),* ***Devdar*** *(Cedrus deodara),* ***Methi*** *(Trigonella foenum-graecum),* ***Jamun*** *(Syzygium cumini),* ***Paneer Dodi*** *(Withania coagulans),* ***Vijaysar*** *(Pterocarpus marsupium),* ***Kutaki*** *(Picrorhiza kurroa),* ***Kali Jiri*** *(Centratherum anthelminticu)*	*Prameh Hara* (Antidiabetic), *Agnideepan* (Carminative), *Medohar* (Hypolipidemic), *Raktashodhak* (Hemopurifier), *Kleda Shoshan* (Desiccant), *Kapha-Vata Shamak* (Dosha-balancer), *Rasayana* (Rejuvenative), *Mutral* (Diuretic)

RESULT

Following a structured three-month *Ayurvedic* treatment regimen, the patient demonstrated marked clinical improvement, indicating that the interventions were effective in managing T2DM with by low fecal pancreatic elastase and elevated cholesterol levels. After treatment, the patient was alert and oriented, with significant relief from earlier symptoms such as generalized weakness, poor appetite, and hyperglycemia. These improvements suggest that the *Ayurvedic* therapies addressed both metabolic dysfunction and neuropathic symptoms typically associated with this condition. This case highlights the potential role of *Ayurvedic* interventions as supportive strategies in the comprehensive management of T2DM with associated pancreatic insufficiency and dyslipidemia. The comparative clinical status before and after treatment is presented in **Table 13.**

Table 13The conditions before and after treatment.

Symptom	Before Treatment	After Treatment
Generalized Weakness	Present	Alleviated
Poor Appetite	Markedly reduced	Appetite improved significantly
Hyperglycemia	Elevated fasting and postprandial glucose levels	Blood glucose levels reduced and better controlled

Implications for Future Research

Although this study yielded promising results in managing T2DM with low fecal pancreatic elastase and elevated cholesterol levels, its limitations, especially the small sample size, underscore the necessity for further research. Future investigations should prioritize large-scale, randomized controlled trials to confirm the safety, effectiveness, and consistency of *Ayurvedic* interventions. Moreover, research exploring long-term outcomes, dosage standardization, underlying pharmacological mechanisms, and integrative treatment approaches will be crucial in formulating evidence-based, standardized therapeutic protocols for the *Ayurvedic* management of T2DM with associated pancreatic insufficiency and dyslipidemia.

DISCUSSION

Ayurvedic treatment for T2DM with low fecal pancreatic elastase and elevated cholesterol levels offers a holistic alternative to conventional therapy by aiming to balance the *Doshas*, enhance digestive function, and eliminate metabolic toxins. This case study presents a 45-year-old female diagnosed with T2DM, complicated by low fecal pancreatic elastase and hyperlipidemia, who underwent a structured *Ayurvedic* regimen. Over the course of treatment, the patient reported significant improvement in symptoms such as generalized weakness, diminished appetite, and hyperglycemia. The outcomes of this case suggest that when applied consistently and under appropriate supervision, *Ayurvedic* interventions can effectively support glycemic control and enhance overall quality of life in individuals with T2DM. The *Samprapti* (pathogenesis) of this condition is detailed in **Fig 6.**[30,31,32,33]

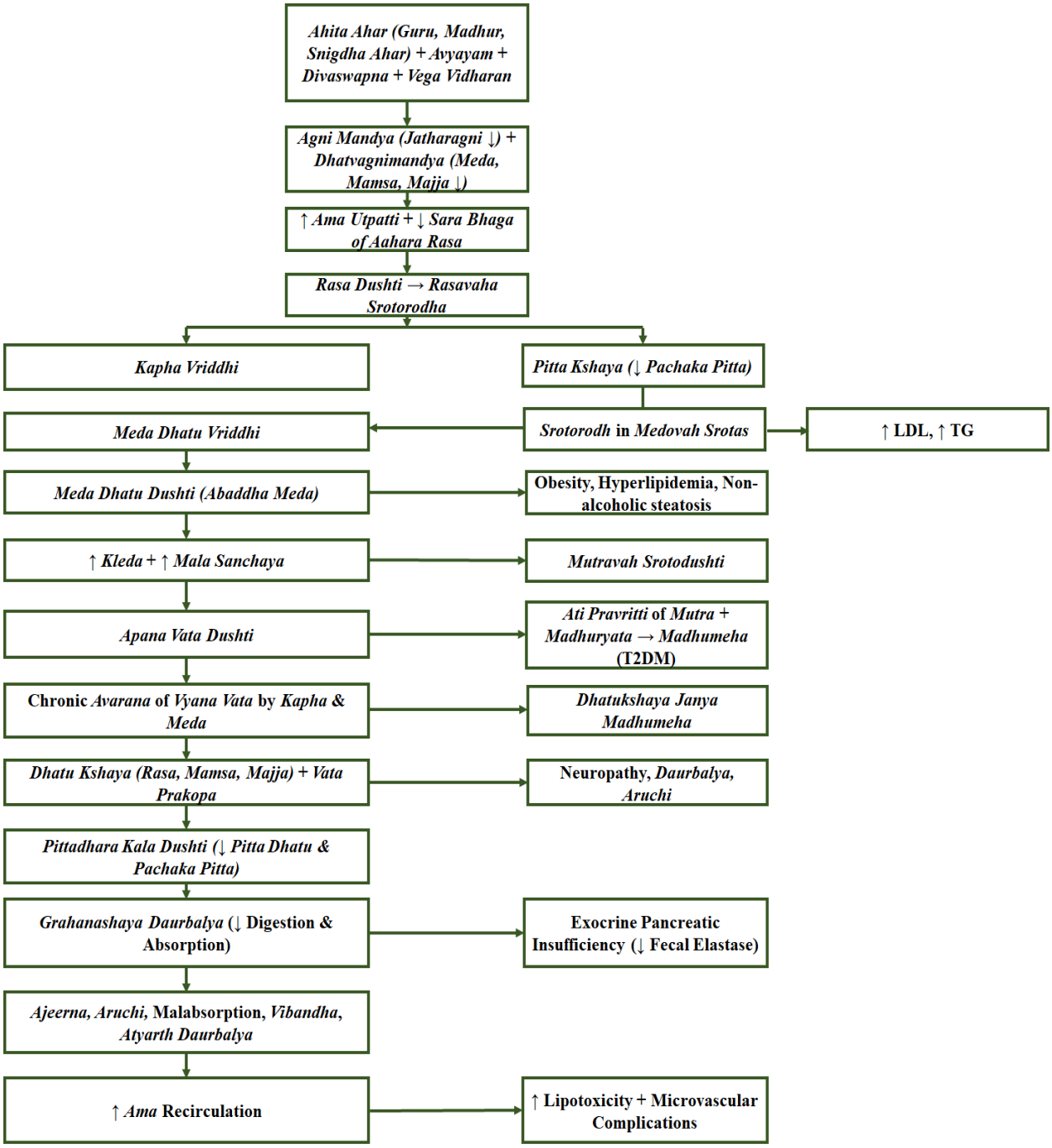
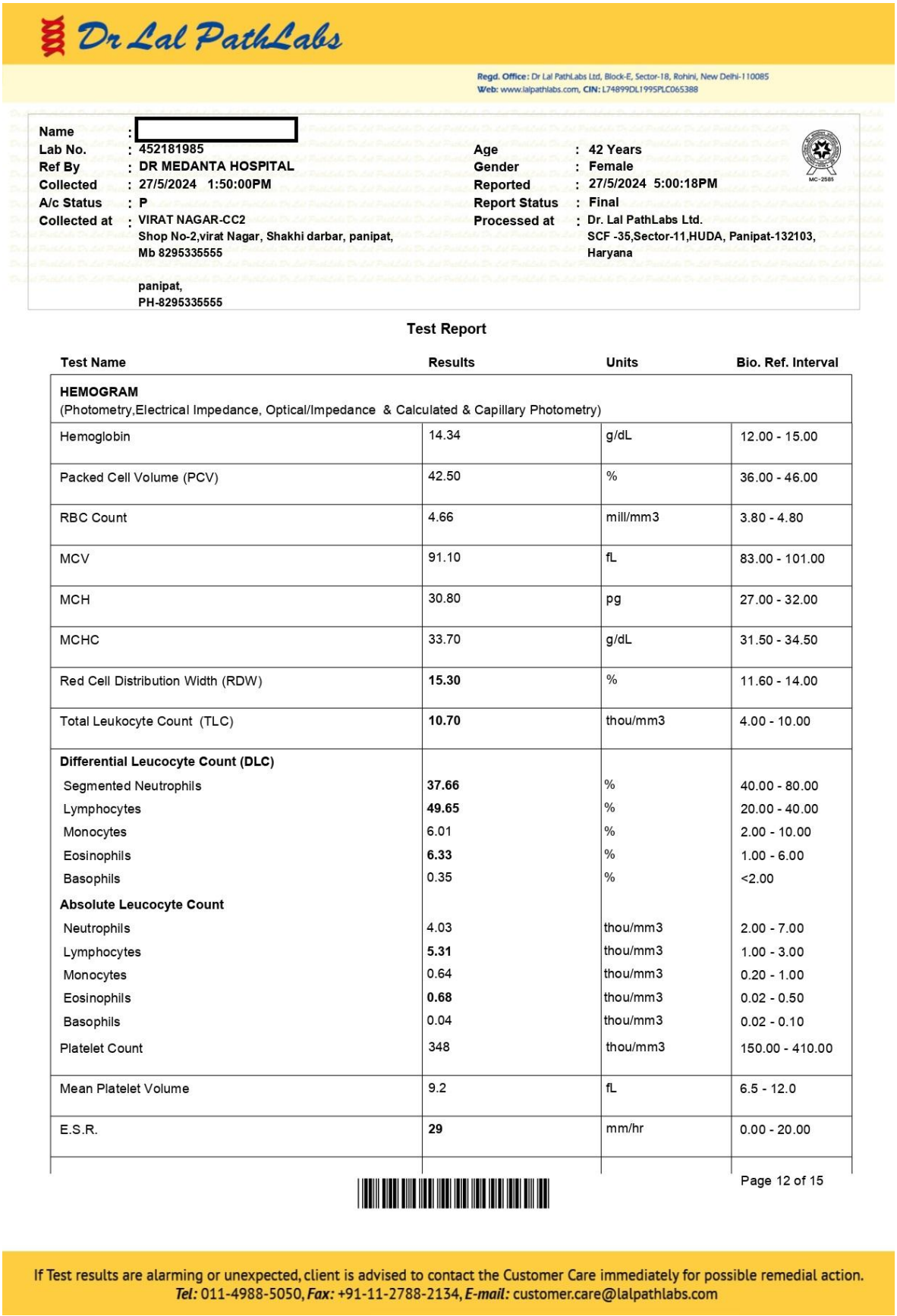


Fig 6: The *Samprapti* of this case study.



Dr Lal PathLabs

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Web: www.lalpathlabs.com, CIN: L74899DL1995PLC065388

Name	:		
Lab No.	: 452181985	Age	: 42 Years
Ref By	: DR MEDANTA HOSPITAL	Gender	: Female
Collected	: 27/5/2024 1:50:00PM	Reported	: 27/5/2024 5:00:18PM
A/c Status	: P	Report Status	: Final
Collected at	: VIRAT NAGAR-CC2 Shop No-2,virat Nagar, Shakhi darbar, panipat, Mb 8295335555 panipat, PH-8295335555	Processed at	: Dr. Lal PathLabs Ltd. SCF -35,Sector-11,HUDA, Panipat-132103, Haryana

MC-2585

Test Report

Test Name	Results	Units	Bio. Ref. Interval
HEMOGRAM (Photometry,Electrical Impedance, Optical/Impedance & Calculated & Capillary Photometry)			
Hemoglobin	14.34	g/dL	12.00 - 15.00
Packed Cell Volume (PCV)	42.50	%	36.00 - 46.00
RBC Count	4.66	mill/mm3	3.80 - 4.80
MCV	91.10	fL	83.00 - 101.00
MCH	30.80	pg	27.00 - 32.00
MCHC	33.70	g/dL	31.50 - 34.50
Red Cell Distribution Width (RDW)	**15.30**	%	11.60 - 14.00
Total Leukocyte Count (TLC)	**10.70**	thou/mm3	4.00 - 10.00
Differential Leucocyte Count (DLC)			
Segmented Neutrophils	**37.66**	%	40.00 - 80.00
Lymphocytes	**49.65**	%	20.00 - 40.00
Monocytes	6.01	%	2.00 - 10.00
Eosinophils	**6.33**	%	1.00 - 6.00
Basophils	0.35	%	<2.00
Absolute Leucocyte Count			
Neutrophils	4.03	thou/mm3	2.00 - 7.00
Lymphocytes	**5.31**	thou/mm3	1.00 - 3.00
Monocytes	0.64	thou/mm3	0.20 - 1.00
Eosinophils	**0.68**	thou/mm3	0.02 - 0.50
Basophils	0.04	thou/mm3	0.02 - 0.10
Platelet Count	348	thou/mm3	150.00 - 410.00
Mean Platelet Volume	9.2	fL	6.5 - 12.0
E.S.R.	**29**	mm/hr	0.00 - 20.00

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Fig. 1: Blood test reports.

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Name	: [redacted]		
Lab No.	: 196367743	Age	: 43 Years
Ref By	: Self	Gender	: Female
Collected	: 11/6/2025 8:31:00AM	Reported	: 11/6/2025 2:49:43PM
A/c Status	: P	Report Status	: Final
Collected at	: VIRAT NAGAR-CC2 Shop No-2,virat Nagar, Shakhi darbar, panipat, Mb 8295335555 panipat, PH-8295335555	Processed at	: Dr. Lal PathLabs Ltd. SCF -35,Sector-11,HUDA, Panipat-132103, Haryana

MC-2585

Test Report

Test Name	Results	Units	Bio. Ref. Interval
COMPLETE BLOOD COUNT; CBC (Photometry,Electrical Impedance, Optical/Impedance & Calculated)			
Hemoglobin	13.57	g/dL	12.00 - 15.00
Packed Cell Volume (PCV)	41.50	%	36.00 - 46.00
RBC Count	4.24	mill/mm3	3.80 - 4.80
MCV	97.80	fL	83.00 - 101.00
Mentzer Index	23.1		
MCH	32.00	pg	27.00 - 32.00
MCHC	32.70	g/dL	31.50 - 34.50
Red Cell Distribution Width (RDW)	14.00	%	11.60 - 14.00
Total Leukocyte Count (TLC)	8.34	thou/mm3	4.00 - 10.00
Differential Leucocyte Count (DLC)			
Segmented Neutrophils	**32.26**	%	40.00 - 80.00
Lymphocytes	**53.32**	%	20.00 - 40.00
Monocytes	7.71	%	2.00 - 10.00
Eosinophils	**6.30**	%	1.00 - 6.00
Basophils	0.41	%	<2.00
Absolute Leucocyte Count			
Neutrophils	2.69	thou/mm3	2.00 - 7.00
Lymphocytes	**4.45**	thou/mm3	1.00 - 3.00
Monocytes	0.64	thou/mm3	0.20 - 1.00
Eosinophils	**0.53**	thou/mm3	0.02 - 0.50

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Fig. 2: The cholesterol test results during the treatment period.

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Name	[redacted]		
Lab No.	: 452181985	Age	: 42 Years
Ref By	: DR MEDANTA HOSPITAL	Gender	: Female
Collected	: 27/5/2024 1:50:00PM	Reported	: 27/5/2024 5:00:18PM
A/c Status	: P	Report Status	: Final
Collected at	: VIRAT NAGAR-CC2 Shop No-2,virat Nagar, Shakhi darbar, panipat, Mb 8295335555 panipat, PH-8295335555	Processed at	: Dr. Lal PathLabs Ltd. SCF -35,Sector-11,HUDA, Panipat-132103, Haryana

MC-2585

Test Report

Test Name	Results	Units	Bio. Ref. Interval
LIPID SCREEN, SERUM (Enzymatic)			
Cholesterol, Total	**217.00**	mg/dL	<200.00
Triglycerides	**439.00**	mg/dL	<150.00
HDL Cholesterol	**36.40**	mg/dL	>50.00
Non-HDL Cholesterol	**181**	mg/dL	<130

Note

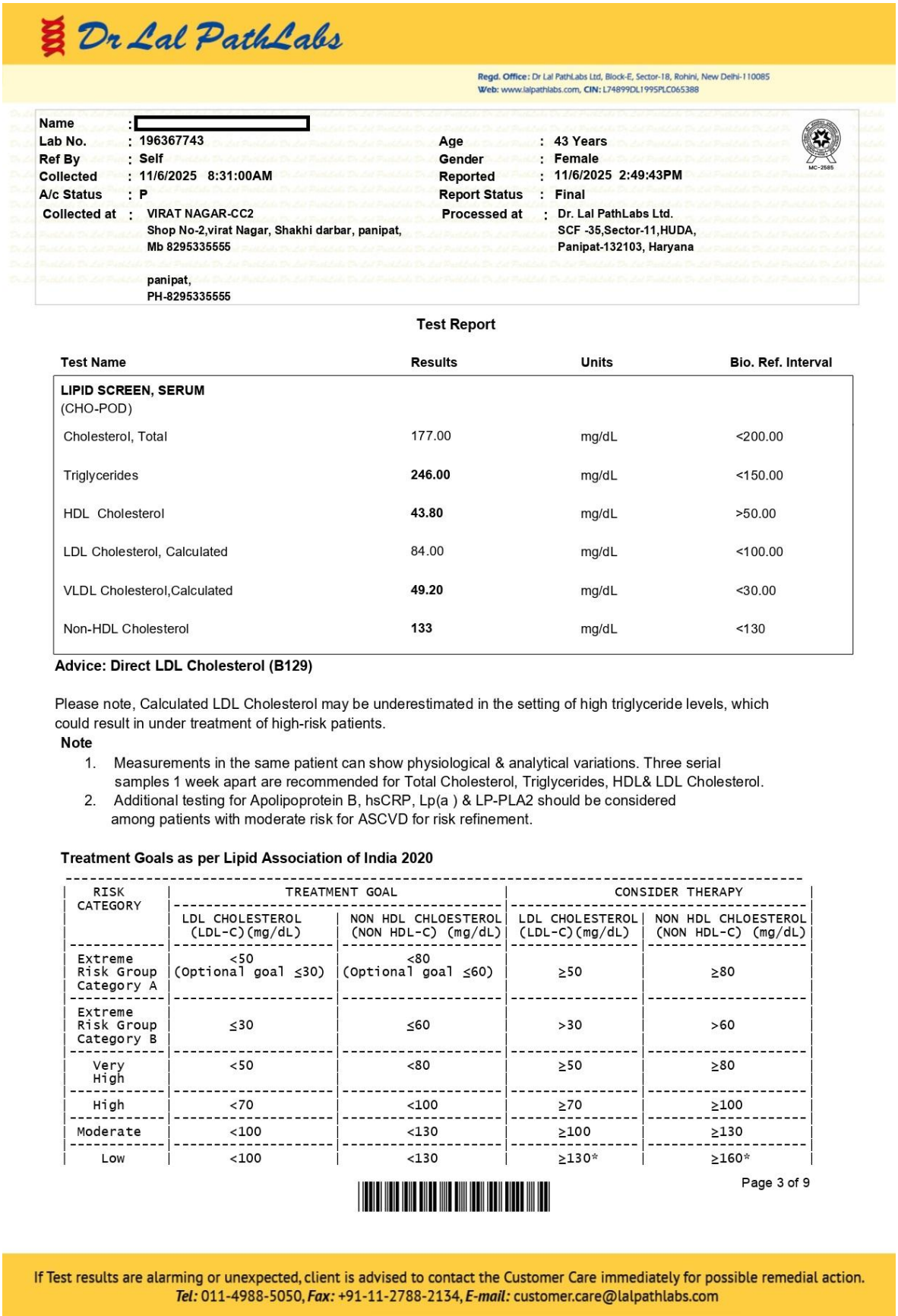
1. Measurements in the same patient can show physiological & analytical variations. Three serial samples 1 week apart are recommended for Total Cholesterol, Triglycerides, HDL& LDL Cholesterol.
2. Additional testing for Apolipoprotein B, hsCRP, Lp(a) & LP-PLA2 should be considered among patients with moderate risk for ASCVD for risk refinement.

Treatment Goals as per Lipid Association of India 2020

RISK CATEGORY	TREATMENT GOAL		CONSIDER THERAPY	
	LDL CHOLESTEROL (LDL-C)(mg/dL)	NON HDL CHLOESTEROL (NON HDL-C) (mg/dL)	LDL CHOLESTEROL (LDL-C)(mg/dL)	NON HDL CHLOESTEROL (NON HDL-C) (mg/dL)
Extreme Risk Group Category A	<50 (Optional goal ≤30)	<80 (Optional goal ≤60)	≥50	≥80
Extreme Risk Group Category B	≤30	≤60	>30	>60
Very High	<50	<80	≥50	≥80
High	<70	<100	≥70	≥100
Moderate	<100	<130	≥100	≥130
Low	<100	<130	≥130*	≥160*

*In low risk patient, consider therapy after an initial non-pharmacological intervention for at least 3 months

GLUCOSE, FASTING (F)
(Hexokinase)



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Web: www.lalpathlabs.com, CIN: L74899DL1995PLC065388

Name : [redacted]
Lab No. : 196367743
Ref By : Self
Collected : 11/6/2025 8:31:00AM
A/c Status : P
Collected at : VIRAT NAGAR-CC2
Shop No-2,virat Nagar, Shakhi darbar, panipat,
Mb 8295335555

panipat,
PH-8295335555

Age : 43 Years
Gender : Female
Reported : 11/6/2025 2:49:43PM
Report Status : Final
Processed at : Dr. Lal PathLabs Ltd.
SCF -35,Sector-11,HUDA,
Panipat-132103, Haryana

MC-2585

Test Report

Test Name	Results	Units	Bio. Ref. Interval
LIPID SCREEN, SERUM (CHO-POD)			
Cholesterol, Total	177.00	mg/dL	<200.00
Triglycerides	**246.00**	mg/dL	<150.00
HDL Cholesterol	**43.80**	mg/dL	>50.00
LDL Cholesterol, Calculated	84.00	mg/dL	<100.00
VLDL Cholesterol,Calculated	**49.20**	mg/dL	<30.00
Non-HDL Cholesterol	**133**	mg/dL	<130

Advice: Direct LDL Cholesterol (B129)

Please note, Calculated LDL Cholesterol may be underestimated in the setting of high triglyceride levels, which could result in under treatment of high-risk patients.

Note

1. Measurements in the same patient can show physiological & analytical variations. Three serial samples 1 week apart are recommended for Total Cholesterol, Triglycerides, HDL& LDL Cholesterol.
2. Additional testing for Apolipoprotein B, hsCRP, Lp(a) & LP-PLA2 should be considered among patients with moderate risk for ASCVD for risk refinement.

Treatment Goals as per Lipid Association of India 2020

RISK CATEGORY	TREATMENT GOAL		CONSIDER THERAPY	
	LDL CHOLESTEROL (LDL-C)(mg/dL)	NON HDL CHLOESTEROL (NON HDL-C) (mg/dL)	LDL CHOLESTEROL (LDL-C)(mg/dL)	NON HDL CHLOESTEROL (NON HDL-C) (mg/dL)
Extreme Risk Group Category A	<50 (Optional goal ≤30)	<80 (Optional goal ≤60)	≥50	≥80
Extreme Risk Group Category B	≤30	≤60	>30	>60
Very High	<50	<80	≥50	≥80
High	<70	<100	≥70	≥100
Moderate	<100	<130	≥100	≥130
Low	<100	<130	≥130*	≥160*

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Fig. 3: The fecal elastase.

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Name	[redacted]		
Lab No.	: 470646344	Age	: 42 Years
Ref By	: DR MEDANTA HOSPITAL	Gender	: Female
Collected	: 25/6/2024 11:07:00AM	Reported	: 26/6/2024 5:08:40PM
A/c Status	: P	Report Status	: Final
Collected at	: VIRAT NAGAR-CC2 Shop No-2,virat Nagar, Shakhi darbar, panipat, Mb 8295335555 panipat, PH-8295335555	Processed at	: LPL-NATIONAL REFERENCE LAB National Reference laboratory, Block E, Sector 18, Rohini, New Delhi -110085

MC-2113

Test Report

Test Name	Results	Units	Bio. Ref. Interval
FECAL ELASTASE (CLIA)	**102.00**	µg/g stool	>200.00

Interpretation

FECAL ELASTASE IN µg/g stool	REMARKS
200 - >500	Normal
100-200	Moderate to mild exocrine pancreatic insufficiency
<100	Severe exocrine pancreatic insufficiency

Note

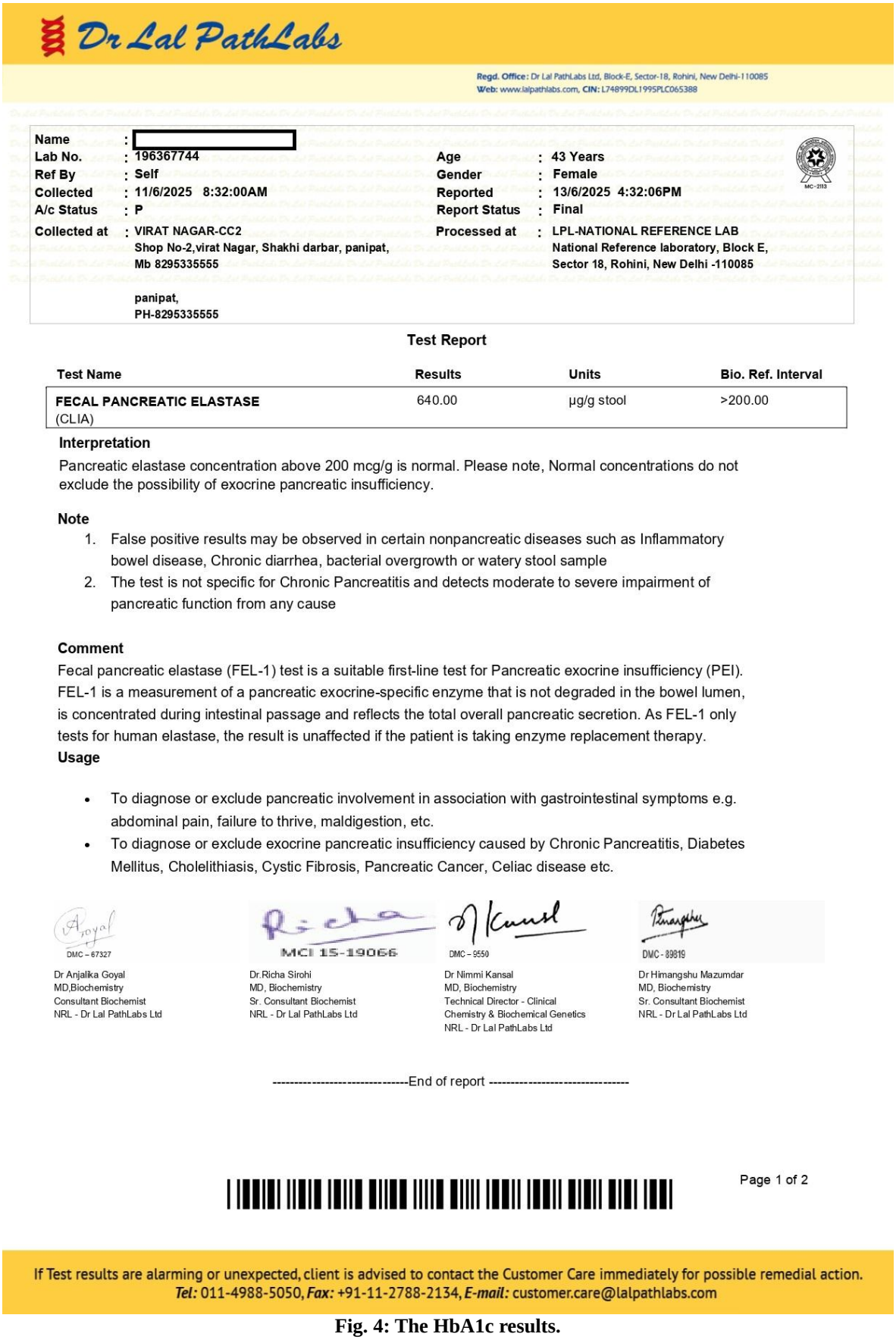
1. False negative result may be observed in mild pancreatic insufficiency but has better sensitivity than other tests
2. False positive results may be observed in certain nonpancreatic diseases such as Inflammatory bowel disease, Chronic diarrhea, bacterial overgrowth or watery stool sample
3. The test is not specific for Chronic Pancreatitis and detects moderate to severe impairment of pancreatic function from any cause

Comment

Pancreatic elastase-1 is a Pancreas specific protease in pancreatic juice. It remains undegraded during intestinal transit and concentration in feces is five to six fold as compared to pancreatic juice. Its measurement in feces has high sensitivity for detection of moderate and severe chronic pancreatitis in adults. It has high sensitivity and high negative predictive value for discriminating between diarrhea of pancreatic and nonpancreatic origin. It is considered the most suitable test to confirm pancreatic insufficiency in screened Cystic Fibrosis infants older than 2 weeks. The test results remain unaffected by pancreatic enzyme supplements.

Usage

- To diagnose or exclude pancreatic involvement in association with gastrointestinal symptoms e.g abdominal pain, failure to thrive, maldigestion, etc.
- To diagnose or exclude exocrine pancreatic insufficiency caused by Chronic Pancreatitis, Diabetes Mellitus, Cholelithiasis, Cystic Fibrosis, Pancreatic Cancer, Celiac disease etc



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Web: www.lalpathlabs.com, CIN: L74899DL1995PLC065388

Name	: [redacted]				
Lab No.	: 196367744		Age	:	43 Years
Ref By	: Self		Gender	:	Female
Collected	: 11/6/2025 8:32:00AM		Reported	:	13/6/2025 4:32:06PM
A/c Status	: P		Report Status	:	Final
Collected at	: VIRAT NAGAR-CC2 Shop No-2,virat Nagar, Shakhi darbar, panipat, Mb 8295335555 panipat, PH-8295335555		Processed at	:	LPL-NATIONAL REFERENCE LAB National Reference laboratory, Block E, Sector 18, Rohini, New Delhi -110085

MC-2113

Test Report

Test Name	Results	Units	Bio. Ref. Interval
FECAL PANCREATIC ELASTASE (CLIA)	640.00	µg/g stool	>200.00

Interpretation

Pancreatic elastase concentration above 200 mcg/g is normal. Please note, Normal concentrations do not exclude the possibility of exocrine pancreatic insufficiency.

Note

1. False positive results may be observed in certain nonpancreatic diseases such as Inflammatory bowel disease, Chronic diarrhea, bacterial overgrowth or watery stool sample
2. The test is not specific for Chronic Pancreatitis and detects moderate to severe impairment of pancreatic function from any cause

Comment

Fecal pancreatic elastase (FEL-1) test is a suitable first-line test for Pancreatic exocrine insufficiency (PEI). FEL-1 is a measurement of a pancreatic exocrine-specific enzyme that is not degraded in the bowel lumen, is concentrated during intestinal passage and reflects the total overall pancreatic secretion. As FEL-1 only tests for human elastase, the result is unaffected if the patient is taking enzyme replacement therapy.

Usage

- To diagnose or exclude pancreatic involvement in association with gastrointestinal symptoms e.g. abdominal pain, failure to thrive, maldigestion, etc.
- To diagnose or exclude exocrine pancreatic insufficiency caused by Chronic Pancreatitis, Diabetes Mellitus, Cholelithiasis, Cystic Fibrosis, Pancreatic Cancer, Celiac disease etc.

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----------End of report ----------

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Fig. 4: The HbA1c results.

Dr Lal PathLabs

Regd. Office: Dr Lal PathLabs Ltd, Block-E, Sector-18, Rohini, New Delhi-110085
Web: www.lalpathlabs.com, CIN: L74899DL1995PLC065388

Name	:				
Lab No.	: 452181985		Age	: 42 Years	
Ref By	: DR MEDANTA HOSPITAL		Gender	: Female	
Collected	: 27/5/2024 1:50:00PM		Reported	: 27/5/2024 5:00:18PM	
A/c Status	: P		Report Status	: Final	
Collected at	: VIRAT NAGAR-CC2 Shop No-2,virat Nagar, Shakhi darbar, panipat, Mb 8295335555 panipat, PH-8295335555		Processed at	: Dr. Lal PathLabs Ltd. SCF -35,Sector-11,HUDA, Panipat-132103, Haryana	

MC-2585

Test Report

Test Name	Results	Units	Bio. Ref. Interval
HbA1c (GLYCOSYLATED HEMOGLOBIN), BLOOD (HPLC, NGSP certified)			
HbA1c	**7.3**	%	4.00 - 5.60
Estimated average glucose (eAG)	163	mg/dL	

Interpretation

HbA1c result is suggestive of Diabetes/ Higher than glycemic goal in a known Diabetic patient.

Please note, Glycemic goal should be individualized based on duration of diabetes, age/life expectancy, comorbid conditions, known CVD or advanced microvascular complications, hypoglycaemia unawareness, and individual patient considerations

Result Rechecked,
Please Correlate Clinically.

Interpretation as per American Diabetes Association (ADA) Guidelines

Reference Group	Non diabetic adults >=18 years	At risk (Prediabetes)	Diagnosing Diabetes	Therapeutic goals for glycemic control
HbA1c in %	4.0-5.6	5.7-6.4	>= 6.5	<7.0

Note: Presence of Hemoglobin variants and/or conditions that affect red cell turnover must be considered, particularly when the HbA1C result does not correlate with the patient's blood glucose levels.

FACTORS THAT INTERFERE WITH HbA1C MEASUREMENT	FACTORS THAT AFFECT INTERPRETATION OF HBA1C RESULTS
Hemoglobin variants,elevated fetal hemoglobin (HbF) and chemically modified derivatives of hemoglobin (e.g. carbamylated Hb in patients with renal failure) can affect the accuracy of HbA1c measurements	Any condition that shortens erythrocyte survival or decreases mean erythrocyte age (e.g.,recovery from acute blood loss, hemolytic anemia, HbSS, HbCC, and HbSC) will falsely lower HbA1c test results regardless of the assay method used.Iron deficiency anemia is associated with higher HbA1c

Dr Lal PathLabs

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Web: www.lalpathlabs.com, CIN: L74899DL1995PLC065388

Name	:				
Lab No.	:	196367743	Age	:	43 Years
Ref By	:	Self	Gender	:	Female
Collected	:	11/6/2025 8:31:00AM	Reported	:	11/6/2025 2:49:43PM
A/c Status	:	P	Report Status	:	Final
Collected at	:	VIRAT NAGAR-CC2 Shop No-2,virat Nagar, Shakhi darbar, panipat, Mb 8295335555 panipat, PH-8295335555	Processed at	:	Dr. Lal PathLabs Ltd. SCF -35,Sector-11,HUDA, Panipat-132103, Haryana

Test Report

Test Name	Results	Units	Bio. Ref. Interval
HbA1c (GLYCOSYLATED HEMOGLOBIN), BLOOD (HPLC, NGSP certified)			
HbA1c	**6.4**	%	4.00 - 5.60
Estimated average glucose (eAG)	137	mg/dL	

Interpretation

HbA1c result is suggestive of at risk for Diabetes (Prediabetes)/ well controlled Diabetes in a known Diabetic

Interpretation as per American Diabetes Association (ADA) Guidelines

Reference Group	Non diabetic adults >=18 years	At risk (Prediabetes)	Diagnosing Diabetes	Therapeutic goals for glycemic control
HbA1c in %	4.0-5.6	5.7-6.4	>= 6.5	<7.0

Note: Presence of Hemoglobin variants and/or conditions that affect red cell turnover must be considered, particularly when the HbA1C result does not correlate with the patient's blood glucose levels.

FACTORS THAT INTERFERE WITH HbA1C MEASUREMENT	FACTORS THAT AFFECT INTERPRETATION OF HBA1C RESULTS
Hemoglobin variants,elevated fetal hemoglobin (HbF) and chemically modified derivatives of hemoglobin (e.g. carbamylated Hb in patients with renal failure) can affect the accuracy of HbA1c measurements	Any condition that shortens erythrocyte survival or decreases mean erythrocyte age (e.g.,recovery from acute blood loss, hemolytic anemia, HbSS, HbCC, and HbSC) will falsely lower HbA1c test results regardless of the assay method used.Iron deficiency anemia is associated with higher HbA1c

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1. The *Samprapti* and *Nidan Parivarjana*

The *Samprapti* of T2DM associated with low fecal pancreatic elastase and elevated cholesterol levels originates from the chronic consumption of *Ahita Ahar* (unwholesome diet) such as Guru (heavy), *Madhura* (sweet), *Snigdha* (oily), and *Abhishyandi* (clogging) foods, along with *Avyayama* (lack of physical activity), *Divaswapna* (daytime sleep), and suppression of natural urges (*Vega Dharana*).[17,34] These factors lead to *Jatharagni Mandya* (weak digestive fire) and subsequently *Dhatvagni Mandya*, particularly at the *Meda Dhatu* level, resulting in the formation of *Ama*.[35] The accumulated *Ama* circulates through the *Rasavaha* and *Medovaha Srotas*, causing obstruction (*Srotorodha*) and aggravating *Kapha Dosha*, while simultaneously depleting *Pachaka Pitta*.[36] This imbalance further impairs pancreatic and hepatic function. The aggravated *Kapha* and obstructed channels eventually lead to

Avarana of *Vata*, specifically *Vyana Vata*, which manifests as *Madhumeha*.[37] As the disease progresses, *Vata* becomes increasingly vitiated, leading to *Dhatukshaya* (tissue depletion), particularly affecting *Rasa*, *Rakta*, *Meda*, *Mamsa*, and *Majja Dhatus*.[38] Low fecal pancreatic elastase reflects *Pachaka Pitta Kshaya* and *Grahani Dushti*, leading to symptoms like *Ajeerna* (indigestion), *Aruchi* (loss of appetite), and *Daurbalya* (weakness).[39] The presence of elevated cholesterol is attributed to *Meda Dhatu Vriddhi* and *Abaddha Meda* formation due to impaired fat metabolism.[40] Thus, the overall pathology involves *Kapha-Pitta* vitiation in the early stages and secondary *Vata* aggravation leading to chronicity and complications.

In terms of *Nidan Parivarjana*, it is essential to avoid heavy, oily, and sweet foods; processed and fried items; and *Kapha*-aggravating substances like curd, bakery products, and red meat.[41] Lifestyle factors such as inactivity, irregular food habits, daytime sleeping, and chronic stress should be corrected.[42] Emotional eating, late-night meals, and suppression of natural urges must be avoided to prevent further aggravation of *Doshas*.[43] Incorporating regular physical activity, timely meals, mental relaxation techniques, and adherence to *Dinacharya* (daily routine) play a vital role in the prevention and management of T2DM with associated pancreatic insufficiency and dyslipidemia.[44] This comprehensive approach ensures correction at the root level of pathogenesis while promoting long-term metabolic balance.

2. The effects of *Ayurvedic* medicines

The *Ayurvedic* formulations administered in this case target both the metabolic and digestive disturbances associated with T2DM complicated by exocrine pancreatic insufficiency and dyslipidemia. Prameh Har Powder and Dr. Madhumeh act as potent *Prameh Hara* and *Medohara* agents, reducing excess glucose and fat accumulation while promoting urinary clearance of toxins (*Mutrala*). Dr. Diab Tablet offers comprehensive support through *Agni deepana* (enhancing digestive fire), *Prameh Hara*, and *Rasayana* (rejuvenative) properties, helping regulate blood sugar and strengthen *dhatus*. DM+ Syrup and Divya Shakti Powder further enhance metabolic fire, promote insulin sensitization, and restore vitality, making them particularly useful in conditions of low digestive and absorptive capacity seen in low fecal elastase levels. Dhatu Poshak Capsule plays a crucial role in replenishing depleted tissues (*Dhatu Kshaya*) such as Rasa, Mamsa, and Majja, thereby improving strength and reducing generalized weakness. Yakrit Shoth Har Vati and Blood Purifier Syrup support *Rakta shodhana* (blood purification) and improve *Yakrit* (liver) function, which is vital for lipid metabolism and detoxification. 32 Herbs Tea and Dr. Nabhi Oil stimulate digestive function and help reduce *Kapha* and *Meda* aggravation, while Dr. Immune Tablet supports *Vyadhik shamatva* (immunity) and reduces systemic inflammation. Although Dr. Tooth Oil is primarily for oral health, it contributes indirectly by reducing microbial load and inflammation, thus supporting systemic balance. Together, these formulations offer a holistic, multi-pronged *Ayurvedic* approach that addresses the root imbalances in T2DM with pancreatic insufficiency and elevated cholesterol, promoting better glycemic control, improved digestion, and overall quality of life.

In *Ayurvedic* pharmacology, the *Rasa Panchaka* (Fivefold Attributes) – namely *Rasa* (taste), *Guna* (qualities), *Virya* (potency), *Vipaka* (post-digestive effect), and *Prabhava* (specific action), determines the therapeutic behavior of herbs.[45] *Ayurvedic* herbs used in the management of T2DM with low fecal pancreatic elastase and high cholesterol levels share common features like *Tikta* (bitter) and *Kashaya* (astringent) *Rasa*, *Laghu* (light) and *Ruksha* (dry) *Guna*, and *Katu* (pungent) *Vipaka*, which help reduce *Kapha* and *Medas* (fat). *Gudmar* and *Jamun* exhibit *Pramehaghna* (anti-diabetic) *Prabhava*.[46,47] *Kutaki* and Neem possess *Sheeta* (cooling) *Virya* and work as *Raktashodhak* (blood purifiers) and metabolic detoxifiers.[48,49] *Methi* and *Karela* stimulate digestion (*Deepana*), reduce excess fat (*Medohara*), and improve glucose metabolism.[50,51] *Vijaysar*, with its *Kashaya Rasa* and *Sheeta Virya*, acts as a *Kapha-Vata Shamak* (*dosha* pacifier).[52] *Ashwagandha* and *Triphala* contribute *Rasayana* (rejuvenative) and *Balya* (strength-promoting) properties, supporting tissue regeneration and immunity.[53,54] *Trikatu* enhance *Agni* (digestive fire) through *Ushna Virya* and *Tikshna Guna*.[55] These herbs holistically correct *Agnimandya* (low digestive fire), reduce *Kleda* (excess moisture), nourish tissues (*Dhatu Poshana*), and stabilize metabolic functions. Their pharmacodynamic synergy makes them suitable for managing the complex interplay of *doshic* imbalance, poor digestion, and metabolic toxicity observed in T2DM with exocrine pancreatic insufficiency and hyperlipidemia.

3. The effects of *Ahar-Vihar*

An accurately designed *Ayurvedic* and DIP Diet was administered alongside classical treatments to manage T2DM with low fecal pancreatic elastase and high cholesterol levels. The diet emphasized *Pathya Ahar* (wholesome foods), including *Mudga Yusha* (green gram soup), *Laja Manda*, *Yavagu* (thin rice gruels), and steamed vegetables like ash gourd and ridge gourd.[56,57,58,59] Beneficial cereals such as *Yava* (barley) and selected millets were encouraged, alongside healthy fats like avocado, flaxseeds, and walnuts.[60,61,62,63] Hypoglycemic fruits like *Jamun*, *Amla*, and pomegranate in moderation were included.[64] Herbs such as *Gudmar*, *Haridra*, *Katuki*, and *Bilva* leaves were favored for their *Pramehaghna* (antidiabetic) and *Raktashodhak* (blood purifying) actions. Conversely, *Apathya Ahar* (unwholesome foods) like deep-fried items, red meat, refined sugar, white rice, and heavy dairy were avoided due to their *Kapha-Medo* aggravating nature.[65,66] *Jalapana* (drinks) recommendations included *Ushnodaka*

(warm water), *Jeera Jal*, Barley water, and *Takra* (spiced buttermilk), while cold beverages, sweetened juices, alcohol, and heavy milkshakes were strictly discouraged.[67,68,69,70,71]

Lifestyle recommendations (*PathyaVihar)* included waking in *Brahma Muhurta*, *Gandusha* (oil pulling), yoga (30–45 minutes), and Pranayama such as *Nadi Shodhana* and *Bhramari*.[72,73] Meal hygiene involved eating only after full digestion of the previous meal, avoiding overeating, and sitting in *Vajrasana* after meals.[74] Late-night meals, day-sleep, excessive screen time, and cold exposure were considered *Apathya*.[75] Regular fasting (once a week), morning sun exposure, and mindful eating with gratitude were emphasized.[76] Recommended *yoga asanas* included *Surya Namaskar, Ardha Matsyendrasana, Pavanamuktasana*, *Bhujangasana*, and *Shavasana*, enhancing metabolic balance and emotional well-being.[77]

CONCLUSION

This case study evaluating the treatment of T2DM with low fecal pancreatic elastase and high cholesterol levels through *Ayurvedic* interventions yields the following findings:

Symptoms: At the time of the initial assessment, the patient presented with symptoms including general weakness, diminished appetite, and elevated blood sugar levels. However, after undergoing *Ayurvedic* treatment, significant symptomatic relief was noted. The patient reported improvement in existing complaints, and importantly, no new symptoms emerged during the course of therapy. These changes reflect positive clinical progress in managing Type 2 Diabetes Mellitus associated with low fecal pancreatic elastase and elevated cholesterol levels, along with an overall enhancement in health and well-being.

Vitals and Investigations: In the management of T2DM associated with low fecal pancreatic elastase and elevated cholesterol levels, the patient demonstrated notable clinical improvements. Blood sugar levels decreased from 159 mg/dl to 129 mg/dl, with a slight stabilization at 136 mg/dl. HbA1c levels improved significantly from 7.3% to 6.4%. Fecal elastase, initially severely low at 102 µg/g stool, increased to 694 µg/g and remained high at 640 µg/g. Cholesterol levels also showed substantial improvement: total cholesterol dropped from 217 mg/dl to 157 mg/dl, triglycerides decreased from a high 439 mg/dl to 220 mg/dl. Non-HDL cholesterol reduced from 181 mg/dl to 112 mg/dl and remained controlled at 133 mg/dl. Improvements in hemoglobin (from 13.83 to 13.57 mg/dl), RBC count (4.32 to 4.24 mill/mm³), and a decline in TLC (from 10.70 to 8.34 thou/mm³) suggest reduced inflammation and better hematological status.

In conclusion, comprehensive *Ayurvedic* treatment for T2DM associated with low fecal pancreatic elastase and elevated cholesterol levels demonstrated encouraging outcomes, reflected through enhanced laboratory parameters, stabilized vital signs, and reduced symptoms. The incorporation of *Ayurvedic* interventions effectively supported symptom relief and contributed to the patient's overall health improvement.

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RESEARCH ARTICLE

INTEGRATIVE HOPE IN ADVANCED CHRONIC KIDNEY DISEASE: AN AYURVEDIC CASE APPROACH

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Abstract

Chronic Kidney Disease (CKD) is a progressive and irreversible disorder characterized by a gradual decline in renal function, with Stage V CKD or End-Stage Renal Disease (ESRD) being the most advanced stage. Conventional management strategies such as pharmacological therapy, dialysis, and transplantation, though effective, are associated with high costs, accessibility issues, and long-term complications. Ayurveda correlates CKD with Vrikka Vikara or Mootravaha Srotas Dushti, where impaired digestion (Agnimandya), accumulation of toxins (Ama), and vitiation of Vata and Kapha Doshas result in renal damage and systemic manifestations. A 45-year-old male presented to Jeena Sikho Lifecare Limited Hospital, Allahabad, India with Stage V CKD and a history of hypertension for three months. Symptoms included Daurbalya (weakness), Kasa (cough), Shwasa (dyspnea), Phenila Mutra Pravritti (frothy urine), Aruchi (loss of appetite), Vibandha (constipation), and Prishta Shoola (back pain). Management included Panchakarma therapies, Ayurvedic formulations, and Pathya–Apathya (diet and lifestyle modifications). The patient showed marked symptomatic improvement including relief of weakness, normalization of appetite and bowel habits, resolution of dyspnea, reduction of urinary frothiness, and partial relief in back pain. Vital parameters such as weight and blood pressure remained stable. Biochemical investigatio ns revealed significant improvement: urea decreased from 222 mg/dL to 82.21 mg/dL, serum creatinine from 9.96 mg/dL to 5.05 mg/dL, and uric acid from 5.9 mg/dL to 3.0 mg/dL, with stable sodium and potassium levels and normalization of calcium.

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This case demonstrates that integrative Ayurvedic management may offer symptomatic relief, biochemical stabilization, and improved quality of life in advanced CKD. Larger controlled studies are needed to confirm efficacy and establish standardized guidelines.

Introduction:-

Chronic Kidney Disease (CKD) is a progressive and irreversible clinical condition in which there is a gradual decline in renal function over time. [1]The disease is staged according to the severity of functional impairment, with Stage 5 CKD, also known as end-stage renal disease (ESRD), representing the most advanced stage. [2]At this level, the kidneys lose their ability to effectively maintain fluid, electrolyte, and metabolic balance, resulting in severe clinical manifestations.[3]Patients often present with fatigue, edema, dyspnea, anorexia, anemia, mineral bone disorders, and systemic complications that significantly impair quality of life. [4]Conventional medical management includes dietary restrictions, pharmacological support, and renal replacement therapies such as dialysis and transplantation. [5]However, these approaches often pose challenges related to cost, accessibility, and long-term side effects, leading many patients to seek integrative and supportive healthcare strategies.[6]

From an Ayurvedic perspective, CKD can be correlated with Vrikkagata Vikara (disorders of the kidneys) or as a chronic manifestation of Mootravaha Srotas Dushti (pathological changes in urinary channels). [7]The root of the disease process lies in Agnimandya (weakness of digestive and metabolic fire), which produces Ama (toxic, unmetabolized material). [8]This Ama vitiates Tridosha (three biological humors), with Kapha (obstructive factor) and Vata (degenerative factor) predominating.[9]Kapha causes Sanga (obstruction) in renal microchannels, leading to fluid retention and sluggish metabolism, while Vata is responsible for Kshaya (degeneration) and the progressive depletion of renal tissues.[10] This Dosha imbalance, along with chronic Dhatu Kshaya (tissue depletion), culminates in advanced renal dysfunction and systemic manifestations.[11]

The Samprapti Ghatak (elements of pathogenesis)[12] of CKD (Stage 5) can be described as Fig 1:

Dosha **(Humoral factors)**	•***Kapha–Vata*** **predominant** ***Tridosha*** **involvement (*Kapha* – obstructive factor, *Vata* – degenerative factor, *Pitta* – secondary involvement)**
Dushya **(Affected body tissues)**	•***Rasa*** **(plasma/lymph),** ***Rakta*** **(blood),** ***Mamsa*** **(muscle tissue),** ***Meda*** **(adipose tissue),** ***Majja*** **(bone marrow/nervous tissue), and** ***Ojas*** **(vital essence/immunity)**
Srotas **(Body channels)**	•***Mootravaha Srotas*** **(urinary channels),** ***Raktavaha Srotas*** **(blood channels)**
Srotodushti Prakara **(Types of channel vitiation)**	•***Sanga*** **(obstruction),** ***Vimargagamana*** **(aberrant/irregular flow),** ***Kshaya*** **(depletion or degeneration)**
Agni **(Digestive/metabolic fire)**	•***Jatharagni*** **(digestive fire) and** ***Dhatvagni Mandya*** **(hypofunction of tissue metabolism)**
Udbhava Sthana **(Site of origin)**	•***Aamashaya*** **(stomach and small intestine – primary origin due to impaired digestion and metabolism)**
Sanchara Sthana **(Site of circulation)**	•***Sarva Sharira*** **(whole body/systemic distribution)**
Vyakti Sthana **(Site of manifestation)**	•***Vrikkas*** **(kidneys as the site of clinical manifestation)**
Adhisthana **(Seat of pathology)**	•***Mootravaha Srotas*** **(urinary channels as the primary seat of pathology)**

Ayurvedic management of CKD in this advanced stage focuses on a holistic treatment protocol aimed at addressing the root pathology as well as systemic manifestations. [13]The primary objectives are Agnideepana and Ama Pachana (enhancing digestion and eliminating toxic metabolites) through Deepana–Pachana herbs, followed by Dosha Shamana (pacification of aggravated Doshas) with Kapha–Vata balancing interventions.[14]Srotoshodhana

(purification of channels) is achieved through mild Mridu Shodhana procedures like Basti therapy with Mutrala (diuretic) and Vrikkahara (nephroprotective) herbs, ensuring unobstructed flow within MootravahaSrotas.

[15]Rasayanatherapy (tissue rejuvenation) plays a vital role in preventing further degeneration, with the use of nephroprotective herbs.[16]Mutra virechaniya dravyas help in regulating urinary output and reducing fluid retention. [17]Additionally, emphasis is placed on Ojasvardhana (enhancing vitality and immunity) through Rasayana preparations and supportive formulations, while Pathya–Apathya (diet and lifestyle regulations) form the foundation of long-term management, including a light, easily digestible, Kapha–Vata pacifying diet and avoidance of heavy, salty, and sour foods.[18]

Thus, CKD in its advanced stage is understood in Ayurveda as a chronic, degenerative condition rooted in Agni dysfunction, Ama formation, and Dosha vitiation, leading to Mootravaha Srotas Dushti with progressive obstruction and degeneration.[19] The integrative Ayurvedic treatment protocol not only addresses the pathogenesis but also strengthens tissues, preserves Ojas, and improves quality of life, thereby aiming to delay disease progression and minimize complications.

Objective:-

To examine the therapeutic outcomes of integrated Ayurvedic management in a 45-year-old male patient suffering from Stage V Chronic Kidney Disease with hypertension.

Materials and Methods:-

Case Report

On September 01, 2025, a 45-year-old male presented to Jeena Sikho Lifecare Limited Hospital, Allahabad, India, where he was clinically diagnosed with Stage V Chronic Kidney Disease (CKD), correlated in Ayurveda with Vrikka Vikara. His past medical history was significant for Uccha Raktachapa (hypertension), persisting for the preceding one and a half years.

At the time of admission, the patient demonstrated multiple clinical manifestations, included Daurbalya (generalized weakness), Kasa (cough), Kricchra Shwasa (breathlessness/dyspnea), Phenila Mutra Pravritti (frothy urine), Aruchi (loss of appetite), Vibandha (constipation), and Prishtha Shoola (lower back pain). No remarkable family history or substance addiction was reported, thereby excluding hereditary and lifestyle-related risk factors apart from hypertension.

The Ashta-vidha Pariksha (eight-fold clinical examination) findings at the initial visit are summarized in Table 1. Laboratory investigation reports obtained during the treatment period are presented in Table 2, while daily vital parameters along with the diabetic chart recorded during the In-Patient Department (IPD) stay are depicted in Table 3. The patient remained admitted for a total duration of 10 days, and discharged on September 10, 2025.

Table 1The Ashta-Vidh Pariksha (examination) during admission

Parameter	01-09-2025
Naadi **(Pulse)**	*Vataj Pittaj*
Mala **(Stool)**	*Baddha* (Constipated)
Mutra **(Urine)**	*Safena* (Frothy)
Jiwha **(Tongue)**	*Saam* (Mild Coated)
Shabda **(Voice)**	*Spashta* (Normal)
Sparsha **(Touch)**	*Anushna sheet* (Normal)
Drik **(Eye)**	*Avikrit* (Normal)
Akriti **(Physique)**	*Madhyam*

Table 2The laboratory investigation reports during the treatment (Fig 2)

Parameter	01-09-2025	10-09-2025
Urea	**222 mg/dL**	**82.21 mg/dL**
Serum Creatinine	**9.96 mg/dL**	5.05 mg/dL
Uric Acid	5.9 mg/dL	**3.0 mg/dL**
Sodium	140.3 mEq/L	141.2 mEq/L
Potassium	**5.56 mEq/L**	5.58 mEq/L
Calcium	**12.2 mg/dL**	9 mg/dL

Table 3 The daily vitals during the IPD treatment

Date	Weight	Blood pressure (mmHg)
01-09-2025	61.3 Kg	110/70 mmHg
02-09-2025	61.2 Kg	120/70 mmHg
03-09-2025	61.5 Kg	110/70 mmHg
04-09-2025	61.3 Kg	120/70 mmHg
05-09-2025	61.5 Kg	110/80 mmHg
06-09-2025	61.7 Kg	110/80 mmHg
07-09-2025	61.6 Kg	120/80 mmHg
08-09-2025	62.3 Kg	110/80 mmHg
09-09-2025	61.5 Kg	110/70 mmHg
10-09-2025	61.7 Kg	110/70 mmHg

II Treatment Plan for the Patient at Jeena Sikho Lifecare Limited Hospital (Fig II):

a. Diet Plan:

The patient was advised to adhere to a Disciplined and Intelligent Person's (DIP) diet in conjunction with an Ayurvedic dietary regimen, aimed at complementing the overall Ayurvedic management of CKD [20].

Table 4. Lifestyle Recommendations:

Practice meditation for relaxation
Perform yoga (*Sukhasan* and *Sukshma Pranayam*).
Ensure 6-8 hours of quality sleep each night
Engage in a 30-minute barefoot brisk walk.
Follow a structured daily routine for optimal health.

***Pathya* (Wholesome/Recommended)**	Light, easily digestible foods such as *yusha* (thin pulses/vegetable soups) prepared from green gram *(Mudga)* or vegetables like bottle gourd, ridge gourd, and pumpkin.
	Freshly cooked rice *(Shali* or old rice) in small portions, along with boiled or steamed vegetables.
	Fruits that are low in potassium and easy to digest, such as apple, pear, papaya, and guava (in moderation).
	Spices in small quantities such as cumin *(Jeeraka),* coriander *(Dhanyaka),* and turmeric *(Haridra)*
Apathya (Unwholesome/To be Avoided)	Excessively heavy, oily, salty, sour, and spicy foods, which aggravate *Kapha* and *Pitta.*
	Pulses like black gram *(Masha),* kidney beans *(Rajma),* chickpeas *(Chana),* and horse gram *(Kulatha)* .
	Fermented foods, pickles, bakery products, and processed foods high in sodium or preservatives.
	Meat, fish, and eggs
	Excess dairy, especially curd, paneer, and cheese
HYDRATION	Water intake should be regulated according to the clinical condition
	Warm water in small, frequent sips is advisable
	Over-hydration should be strictly avoided
MILLET INTAKE	Millets such as foxtail millet *(Kangni),* little millet *(Kutki),* and barnyard millet *(Sanwa)* may be included in moderation
FASTING	Weekly once fasting is advised

The dietary approach (Table 5)

Meal Timing and Structure (Table 6):

Early Morning (5:45 AM)	150 ml Herbal tea with curry leaves, raw ginger, and turmeric.
Breakfast (9:00-10:00 AM)	Steamed seasonal fruits, steamed sprouts, and fermented millet shake
Morning Snacks (11:00 AM)	Red juice (150 ml) and soaked almonds
Lunch (12:30-2:00 PM)	Plate 1 with steamed salad and Plate 2 with cooked millet
Evening Snacks (4:00-4:20 PM)	Green juice (150 ml) with 4 almonds.
Dinner (6:15-7:30 PM)	Steamed salad, chutney, soup, and millet khichdi

Panchakarma procedures administered to patient during the IPD treatment

Awagah Swedan[21,22]

- The patient was seated in warm water immersion, with the level maintained up to the umbilicus.
- The water temperature was regulated at approximately 42 °C to promote diaphoresis.
- The intervention was continued for a duration of around 40 minutes.

Abhyanga with Mahanarayan Oil[23]

- About 150 ml of Mahanarayan Taila was taken and warmed gently using the bain-marie (hot water bath) method to a lukewarm temperature.
- The lukewarm oil was applied evenly over the entire body, starting from the head (Shiras) and proceeding towards the feet (Pada).
- Long, downward strokes were given on the limbs and circular movements over the joints, with gentle to moderate pressure. Special focus was given to the back, waist, and lower limbs.
- The massage was continued for approximately 30 minutes, ensuring adequate oleation and absorption of the oil.
- The oil was allowed to remain on the body for 20 minutes.
- Adequate rest was advised post-procedure.
-

Swedan with Dashmool Kwath[24]

- For the procedure, 50 g of Dashmool coarse powder was taken and boiled with 800 ml of water, reduced to one-fourth (approximately 200 ml) to obtain the Dashmool Kwatha. The decoction was filtered and kept lukewarm for use in the Swedana process.
- After Abhyanga, the patient was comfortably seated on a Swedana chair. Warm vapors of Dashmool Kwatha were directed towards the body in a controlled manner, with care to avoid excessive heat near the head and chest.
- Steam was applied evenly until mild perspiration occurred, focusing particularly on the back and lower limbs.
- The fomentation was continued for about 20 minutes.
- Following Swedana, the patient was advised to rest in a warm environment for 15 minutes.
- Light, easily digestible food and warm water were recommended, and exposure to cold or exertion was strictly avoided.

MatraBasti with Punarnava Tail [25]

- About 90 ml of Punarnava Taila was measured for administration. The oil was gently warmed using the bain-marie (hot water bath) method to achieve a lukewarm temperature suitable for instillation.
- The patient was made to lie down in the left lateral position (Vama Parshva Shayana) with the left leg extended and the right leg flexed at the knee and hip.
- Using a sterilized enema syringe and rubber catheter, the lukewarm Punarnava Taila was slowly introduced into the rectum under aseptic conditions.
- The oil was retained comfortably, indicating proper absorption and action of the Matra Basti.
- The patient was advised to rest in a supine position for 20 minutes following the administration.
- Light, easily digestible diet and avoidance of heavy exertion were recommended post-procedure.

Vrikka Basti with Sahacharadi oil[26]

- Sahacharadi Taila was taken in 80 ml and gently warmed using the bain-marie (hot water bath) method to attain a lukewarm temperature suitable for external application.
- The patient was instructed to lie in a prone position comfortably on the therapy table.
- A circular reservoir was constructed over the Vrikka Pradesh (lumbar region over kidneys) using black gram flour dough (Masha pinda) to form a leak-proof boundary, with a height of about 2–3 cm.
- The lukewarm Sahacharadi Taila was gently poured into the dough reservoir until it covered the lumbar region adequately. The oil was maintained at a constant lukewarm temperature throughout the procedure by replacing it intermittently with freshly warmed oil.
- The oil was retained within the basti reservoir for 30 minutes.
- After the stipulated duration, the oil was carefully removed, and the dough ring dismantled.
- The patient was advised rest, with avoidance of cold exposure or strenuous activity immediately after the procedure.

Copper plate therapy[27]

- Therapeutic copper plates of standardized size and thickness were cleaned, sterilized, and gently warmed before application.
- The patient was comfortably positioned on the therapy table in a prone posture, allowing access to the treatment site.
- The prepared copper plates were placed over the lumbar and renal region (Vrikka Pradesh). The plates were kept in close contact with the skin for the prescribed duration. Warmth was maintained either through pre-heated plates or by covering with warm compresses.
- The plates were retained for approximately 30 minutes.
- After the stipulated time, the copper plates were removed, and the local area was gently wiped with a warm, damp cloth.

IV Medicinal Interventions

a) The allopathic medicines

The patient was taking necessary allopathic medicines during IPD which is mentioned in Table 7.

Medicine	Initial Dose	Adjustment	Reason for Adjustment
Torasemide	10 mg BD	Reduced to 5 mg OD	Pedal oedema and facial puffiness improved; urine output normalized
Sodium Bicarbonate	500 mg BD	Reduced to 500 mg OD	Correction of metabolic acidosis and improved biochemical profile
Dapagliflozin	10 mg OD	Discontinued	Blood glucose controlled; risk of worsening renal function avoided
S-Metoprolol Succinate	23.75 mg OD	Continued at lower frequency	Blood pressure stabilized
Rosuvastatin	10 mg OD	Discontinued	Lipid profile improved and maintained

b) The Ayurvedic medicine

The Ayurvedic regimen employed in this case were Dr. Kidney Care Tablet, CKD Tablet, Mutra Vardhak Vati, LIV Shuddhi Tablet, Amalpit Nashak, Gokshura Tablet and Renal Care Support Syrup (Table 8).

Table 8. Medications taken during the treatment period

Medicine Name	Ingredients	Dosage with *Anupana*	Therapeutic Effects
Dr. Kidney Care Tablet	***Gokshur*** *(Tribulus terrestris),* ***Apamarg*** *(Achyranthes aspera),* ***Mulethi*** *(Glycyrrhiza glabra),* ***Punarnava*** *(Boerhavia diffusa),* ***Varun Chhaal*** *(Crataeva nurvala),* ***and Sheetal Chini*** *(Piper cubeba).*	1 TAB BD (*Adhobhakta* with *koshna jala*- After meal with lukewarm water)	*Mutravaha Srotas Shodhana* (cleansing of the urinary channels), *Vata-Kapha Shamana* (pacification of aggravated *Vata* and *Kapha Doshas*), *Mutrala* (diuretic), *Shothahara* (anti-inflammatory), *Rasayana* (rejuvenative), *Agnideepana* (enhancement of digestive fire), *Amapachana* (digestion and elimination of metabolic toxins).
CKD Tablet	***Pashanbhed*** *(Bergenia ciliata),* ***Varun*** *(Crataeva nurvala),* ***Punarnava*** *(Boerhavia diffusa),* ***Gokhru*** *(Tribulus terrestris),* ***Apamarg*** *(Achyranthes aspera),* ***Haldi*** *(Curcuma longa),* ***Charila*** *(Embelia ribes),* ***Kulthi*** *(Dolichos biflorus),* ***Harad*** *(Terminalia chebula),* ***Bhumiawla*** *(Pyrrosia piloselloides),* ***Giloy*** *(Tinospora cordifolia),* ***Shitalchini*** *(Vernonia cinerea),* ***Anantmool*** *(Hemidesmus indicus),* ***Khas*** *(Vetiveria zizanoides),* ***Yab Kshar*** *(Alkaline substance, botanical origin unclear),* ***Muli Kshar*** *(Raphanus sativus),* ***Kalmi Shora*** *(Sodium bicarbonate),* ***Sajji Kshar*** *(Traditional alkaline substance, botanical origin unclear),* ***Shilajit*** *(Asphaltum),* ***Hajral Yahud*** *(Silicon dioxide),* ***Shwet Parpati*** *(Mercury-based preparation in Ayurvedic medicine).*	1 TAB BD (*Adhobhakta* with *koshna jala*)	*Vata-Pitta Shaman (Dosha* pacifier), *Raktashodhana* (Blood purifier), *Vrikkadhara* (Kidney tonic), *Shoth har* (Anti-inflammatory), *Mutral* (Diuretic)
Mutra Vardhak Vati	***Gokshur*** *(Tribulus terrestris),* ***Guggul*** *(Commiphora wightii),* ***Sonth*** *(Zingiber officinale),* ***Kalimirch*** *(Piper nigrum),* ***Pippal*** *(Piper longum),* ***Bahera*** *(Terminalia bellerica),* ***Harad*** *(Terminalia chebula),* ***Amla*** *(Phyllanthus emblica),* ***Motha*** *(Cyperus rotundus).*	1 TAB BD (*Adhobhakta* with *koshna jala*)	*Mutravardhaka* (Diuretic), *Srotoshadhaka* (Channel cleanser), *Deepan* (Appetizer), *Lekhana* (Fats and tissues remover), *Anulomana* (Pacifier of *Vata* and promoting elimination)
LIV Shuddhi Tablet	***Milk Thistle*** *(Silybum marianum),* ***Guduchi*** *(Tinospora cordifolia),* ***Dandelion*** *(Taraxacum officinale),* ***Tulsi*** *(Ocimum sanctum),* ***Punarnava*** *(Boerhavia diffusa),* ***Amla*** *(Phyllanthus emblica) and* ***Arjuna*** *(Terminalia arjuna)*	1 TAB BD (*Adhobhakta* with *koshna jala*)	*Raktashodhak* (Blood purifier), *Deepan* (Appetizer), *Pachan* (Digestant), *Shoth har* (Anti-inflammatory), *Vata-kapha shamaka (Dosha*- balancer), *Rasayana* (Rejuvenator), *Ojovardhaka* (Immunity enhancer)
Amalpit Nashak	***Mulethi*** *(Glycyrrhiza glabra),* ***Pudina*** *(Mentha spicata or Mentha arvensis),* ***Hing*** *(Ferula assa-foetida),* ***Chitrak*** *(Plumbago zeylanica),* ***Jeera*** *(Cuminum cyminum),* ***Vidang*** *(Embelia ribes),* ***Ajwain*** *(Trachyspermum ammi),* ***Marich*** *(Piper nigrum),* ***Pipal*** *(Piper longum),* ***Shunthi*** *(Zingiber officinale),* ***Amla*** *(Emblica officinalis / Phyllanthus emblica),* ***Vibhitaki*** *(Terminalia bellirica),* ***Haritaki*** *(Terminalia chebula),* ***Shankh Bhasm*** *(Calcined conch shell ash),* ***Lavang*** *(Syzygium aromaticum).*	1 TAB BD (*Adhobhakta* with *koshna jala*)	*Pittashamak (Pitta* pacifier), *Agnideepan* (Digestive fire enhancer), *Amapachan* (Metabolic toxin eliminator), *Shoth har* (Anti-inflammatory), *Vatanulomana (Vata* regulator), *Rasayana* (Rejuvenator), *Ojovardhaka* (Immunity enhancer)
Gokshura Tablet	***Gokshur*** *(Tribulus terrestris)*	1 TAB BD (*Adhobhakta* with *koshna jala*)	*Mutral* (Diuretic), *Ashmarighna* (Anti-urolithic), *Shoth har* (Anti-inflammatory), *Vata-Pitta Shamaka* (Balances *Vata* and *Pitta doshas), Balya* (Tonic), *Rasayana* (Rejuvenative), *Vrishya* (Aphrodisiac).
Renal Care Support Syrup	***Nimba*** *(Azadirachta indica),* ***Arjuna*** *(Terminalia arjuna),* ***Gokshura*** *(Tribulus terrestris),* ***Hareetaki*** *(Terminalia chebula),* ***Ashwagandha*** *(Withania somnifera),* ***Karanja*** *(Pongamia pinnata),* ***Chirayata*** *(Swertia chirayita).*	15 ml BD (*Adhobhakta* with *sama matra koshna jala*- After meal with equal amount of lukewarm water)	*Mutravirechana* (Diuretic/Laxative), *Vata-Kapha Shamaka* (Pacifies *Vata* and *Kapha), Shoth har* (Anti-inflammatory), *Rasayana* (Rejuvenator), *Ashmarihara* (Anti-urolithiatic)

Result

After the IPD Ayurvedic treatment, the patient got significant improvement in clinical symptoms and biochemical parameters, indicating the effectiveness of the interventions in the management of CKD. A marked reduction in weakness, dyspnea, frothy urine, reduced appetite, constipation and backache, reflecting a positive therapeutic response to the Ayurvedic regimen. The patient's condition at the time of admission and discharge is summarized in Table 9.

Table 9 The conditions during the admission and discharge

Condition	Before Treatment	After Treatment
Weakness [28]	Moderate	Relief
Dyspnea [29]	Grade 2	Grade 0
Urine	Frothy	Normal
Appetite	Reduced	Normal
Bowel	Constipated	Clear
Backache [30]	6/10	5/10

Discussion:-

This case report presents the Ayurvedic therapeutic interventions and formulations administered to a 45-year-old male patient diagnosed with CKD stage V. The patient manifested symptoms of weakness, dyspnea, frothy urine, reduced appetite, constipation and backache. The detailed Samprapti (pathogenesis) for this condition is illustrated in Fig VI. [31]

Fig VI. The Samprapti for this study

The Samprapti and Nidan Parivarjana

The Samprapti (pathogenesis) of CKD with hypertension can be understood through the lens of Ayurveda as a progressive disorder arising from Agnimandya (impaired digestive and metabolic fire) leading to the formation of Ama (toxic, unmetabolized byproducts). This Ama circulates systemically and vitiates primarily Vata and Kapha Doshas. Kapha is responsible for Sanga (obstruction) in the renal microchannels (Mootravaha Srotas), while Vata contributes to Kshaya (degeneration) and tissue depletion over time. Continuous Srotodushthi (channel impairment), particularly of Mootravaha, Raktavaha, and Medovaha Srotas, results in microvascular damage, obstruction of normal urinary flow, and deranged metabolism. As the pathology advances, there is progressive Dhatu Kshaya (depletion of tissues) involving Rasa, Rakta, Mamsa, Meda, Majja, and Ojas, culminating in Vrikka Dushti (renal impairment) with classical clinical features such as weakness, dyspnea, frothy urine, loss of appetite, constipation, and backache.[33]

Nidan Parivarjana (elimination of causative factors) is considered the foremost principle of Ayurvedic management, and in the case of CKD with hypertension, it involves avoiding all causative and aggravating factors that contribute to disease progression. This includes the restriction of Atisnigdha (excess oily), Ati-Lavana (salty), Guru (heavy), and Abhishyandi (obstructive) foods, along with lifestyle factors such as sedentary habits, stress, and irregular sleep that aggravate Kapha and Vata Doshas.[32]Further, control of Uccha Raktachapa (hypertension) is crucial, as persistent elevation of blood pressure exacerbates Raktavaha Srotas Dushti (vascular impairment) and accelerates renal damage.[33] By adhering to Nidan Parivarjana, the recurrence of pathological processes is minimized, thereby slowing the progression of CKD, supporting renal function, and enhancing the overall quality of life of the patient.

The effects of Panchakarma therapies

The Panchakarma interventions administered in this case demonstrated a comprehensive approach aimed at addressing both systemic and localized pathophysiology of CKD (Vrikka Vikara) with hypertension. Awagaha Swedana promoted diaphoresis and improved peripheral circulation, thereby aiding in the reduction of edema and stiffness.[21,22]Abhyanga with Mahanarayan Taila provided oleation and nourishment to the tissues, pacifying aggravated Vata, alleviating musculoskeletal discomfort, and inducing relaxation. [23]This was followed by Dashmool Kwatha Swedana, which enhanced the effects of Abhyanga by facilitating deeper detoxification, improving perspiration, and relieving backache (Prishta Shoola) and breathlessness (Shwasa).[24]MatraBasti with Punarnava Taila acted as a localized therapeutic enema, offering both Vata pacification and nephroprotective benefits through its Mutrala (diuretic) and Rasayana (rejuvenative) effects, contributing to the regulation of urinary output and reduction of fluid overload. [25]Similarly, Vrikka Basti with Sahacharadi Taila provided direct oleation and strengthening to the renal region, improving local circulation and relieving stiffness and pain.[26] Additionally, Copper Plate Therapy applied over the lumbar region supported Shothahara (anti-inflammatory) action and enhanced systemic bioenergy balance through localized thermal and trace mineral effects. [27]

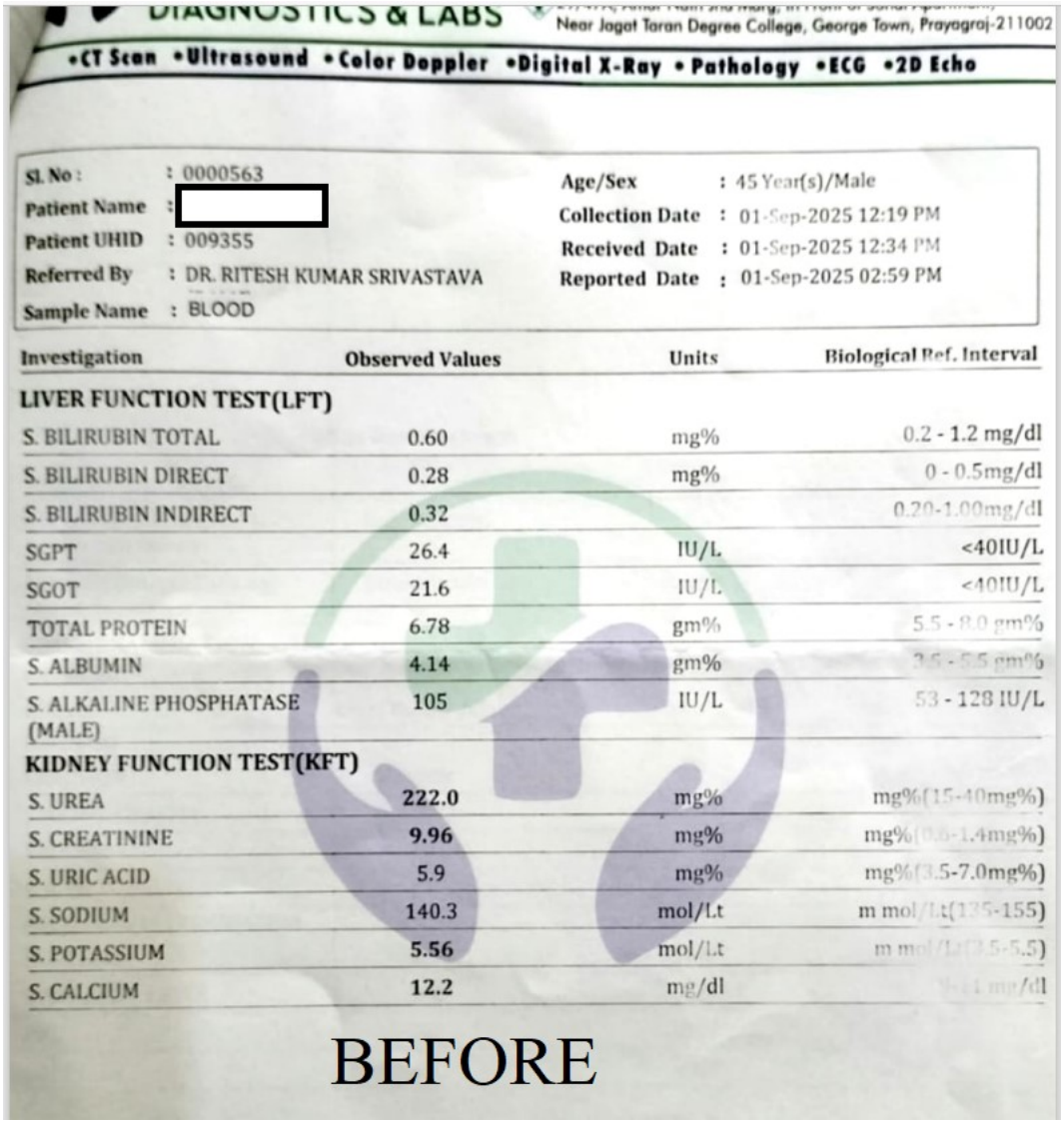
The effects of Ayurvedic medicines

The common ingredients across these formulations, when analyzed through Ras Panchaka, reveal their synergistic potential in the management of CKD (Vrikka Vikara). Gokshura, with Madhura Rasa (sweet taste), Sheeta Virya (cold potency), and Madhura Vipaka (sweet post-digestive effect), acts as a Mutrala (diuretic), Balya (strengthening), and Rasayana (rejuvenative), supporting urinary flow and protecting renal tissue. [34] Punarnava, characterized by Tikta–Kashaya Rasa (bitter and astringent taste), Laghu–Ruksha Guna (light and dry qualities), Ushna Virya(hot potency), and Katu Vipaka (pungent post-digestive effect), exerts Shothahara (anti-inflammatory), Mutrala (diuretic), and Tridosha-pacifying actions, particularly effective in reducing edema and fluid overload. [35] Varuna, with Tikta–Katu Rasa, Ushna Virya, and Katu Vipaka, acts as an Ashmarighna (anti-urolithiatic) and Mutravaha Srotoshodhaka (urinary channel cleanser), thereby preventing obstruction and stone formation. [36]Haritaki, Vibhitaki, and Amalaki, collectively known as Triphala, possess Kashaya–Amla–Madhura Rasas, Ushna Virya, and Madhura Vipaka, which regulate Agni, detoxify Srotas, act as mild laxatives, and serve as Rasayana agents, aiding in metabolic correction and tissue rejuvenation. [37] Guduchi, with Tikta Rasa, Guru–Snigdha Guna, Ushna Virya, and Madhura Vipaka, exhibits Rasayana, Deepana–Pachana, and immunomodulatory effects[38], while Arjuna, possessing Kashaya Rasa, Sheeta Virya, and Katu Vipaka, strengthens Raktavaha Srotas and provides cardioprotective benefits, which are crucial in CKD patients with hypertension.[39]

The effects of Ahar-vihar

The adoption of appropriate Ahara (diet) and Vihara (lifestyle practices) plays a crucial role in the management of CKD by slowing disease progression and improving quality of life. Pathyaahara such as light, easily digestible foods like yusha prepared from Mudga, boiled vegetables, low-potassium fruits, and freshly cooked Shali rice helps pacify aggravated Kapha–Vatadosha and maintain Agni, while small amounts of Jeeraka, Dhanyaka, and Haridra further enhance digestion and prevent Ama formation. [40,41] In contrast, Apathyaahara including heavy, oily, salty, fermented foods, protein-rich pulses such as Masha, Rajma, Chana, and Kulattha, meat, fish, and excess dairy aggravates Kapha and Pitta, causing Srotorodha and worsening renal dysfunction. [42] Hydration with small, frequent sips of warm water, while avoiding over-hydration, supports renal function, and moderate inclusion of millets such as Kangni, Kutki, and Sanwa aids Kapha-Meda balance. [43,44] Weekly fasting offers digestive rest and helps in Amapachana. Complementary Vihara practices such as meditation, Sukhasana and Sukshma Pranayam, adequate sleep, barefoot brisk walking, and adherence to a structured daily routine improve psychosomatic balance, strengthen Ojas, and reduce metabolic burden. Collectively, these interventions ensure Dosha balance, Srotoshodhana (channel cleansing), Dhatu Poshana (tissue nourishment), and preservation of Ojas, thereby improving clinical outcomes in CKD.[45,46]

Fig 2. The laboratory investigation reports during the treatment

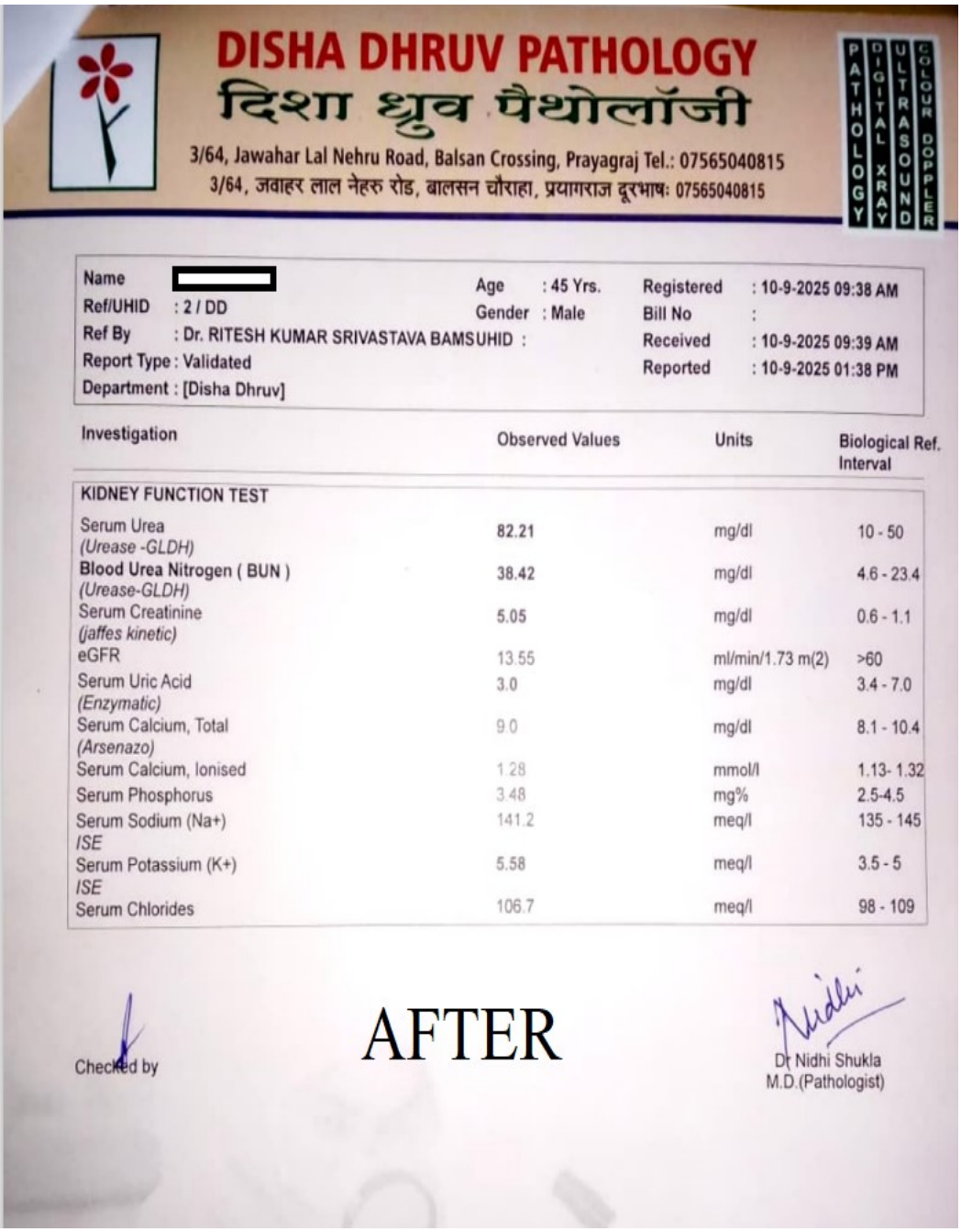


DIAGNOSTICS & LABS
Near Jagat Taran Degree College, George Town, Prayagraj-211002
•CT Scan •Ultrasound •Color Doppler •Digital X-Ray • Pathology •ECG •2D Echo

Sl. No : 0000563		Age/Sex	: 45 Year(s)/Male
Patient Name : [redacted]		Collection Date	: 01-Sep-2025 12:19 PM
Patient UHID : 009355		Received Date	: 01-Sep-2025 12:34 PM
Referred By : DR. RITESH KUMAR SRIVASTAVA		Reported Date	: 01-Sep-2025 02:59 PM
Sample Name : BLOOD			

Investigation	Observed Values	Units	Biological Ref. Interval
LIVER FUNCTION TEST(LFT)			
S. BILIRUBIN TOTAL	0.60	mg%	0.2 - 1.2 mg/dl
S. BILIRUBIN DIRECT	0.28	mg%	0 - 0.5mg/dl
S. BILIRUBIN INDIRECT	0.32		0.20-1.00mg/dl
SGPT	26.4	IU/L	<40IU/L
SGOT	21.6	IU/L	<40IU/L
TOTAL PROTEIN	6.78	gm%	5.5 - 8.0 gm%
S. ALBUMIN	4.14	gm%	3.5 - 5.5 gm%
S. ALKALINE PHOSPHATASE (MALE)	105	IU/L	53 - 128 IU/L
KIDNEY FUNCTION TEST(KFT)			
S. UREA	222.0	mg%	mg%(15-40mg%)
S. CREATININE	9.96	mg%	mg%(0.6-1.4mg%)
S. URIC ACID	5.9	mg%	mg%(3.5-7.0mg%)
S. SODIUM	140.3	mol/Lt	m mol/Lt(135-155)
S. POTASSIUM	5.56	mol/Lt	m mol/Lt(3.5-5.5)
S. CALCIUM	12.2	mg/dl	9.4 mg/dl

BEFORE



DISHA DHRUV PATHOLOGY
दिशा ध्रुव पैथोलॉजी
3/64, Jawahar Lal Nehru Road, Balsan Crossing, Prayagraj Tel.: 07565040815
3/64, जवाहर लाल नेहरु रोड, बालसन चौराहा, प्रयागराज दूरभाषः 07565040815

PATHOLOGY DIGITAL XRAY ULTRASOUND COLOUR DOPPLER

Name [redacted]	Age : 45 Yrs.	Registered	: 10-9-2025 09:38 AM
Ref/UHID : 2 / DD	Gender : Male	Bill No	:
Ref By : Dr. RITESH KUMAR SRIVASTAVA BAMSUHID :		Received	: 10-9-2025 09:39 AM
Report Type : Validated		Reported	: 10-9-2025 01:38 PM
Department : [Disha Dhruv]			

Investigation	Observed Values	Units	Biological Ref. Interval
KIDNEY FUNCTION TEST			
Serum Urea *(Urease -GLDH)*	82.21	mg/dl	10 - 50
Blood Urea Nitrogen (BUN) *(Urease-GLDH)*	38.42	mg/dl	4.6 - 23.4
Serum Creatinine *(jaffes kinetic)*	5.05	mg/dl	0.6 - 1.1
eGFR	13.55	ml/min/1.73 m(2)	>60
Serum Uric Acid *(Enzymatic)*	3.0	mg/dl	3.4 - 7.0
Serum Calcium, Total *(Arsenazo)*	9.0	mg/dl	8.1 - 10.4
Serum Calcium, Ionised	1.28	mmol/l	1.13- 1.32
Serum Phosphorus	3.48	mg%	2.5-4.5
Serum Sodium (Na+) *ISE*	141.2	meq/l	135 - 145
Serum Potassium (K+) *ISE*	5.58	meq/l	3.5 - 5
Serum Chlorides	106.7	meq/l	98 - 109

Checked by

AFTER

Dr Nidhi Shukla
M.D.(Pathologist)

Future Research Perspectives

This case study highlights the management of a 45-year-old male with stage V CKD and hypertension, showing promising improvements with Ayurvedic interventions. However, to validate efficacy, safety, and reproducibility, larger randomized controlled trials are required to develop standardized protocols and evidence-based guidelines for integrating Ayurveda into conventional nephrology practice.

Conclusion:-

The following conclusions can be drawn from this case study on the management of CKD using Ayurvedic treatments:

Symptoms: Following the Ayurvedic interventions, the patient demonstrated notable symptomatic improvement. Weakness, which was moderate at baseline, showed marked relief. Dyspnea, initially graded as 2, was completely resolved (Grade 0). Urinary abnormality, previously characterized by frothiness, returned to normal. Appetite, which had been reduced, normalized post-treatment, while bowel function improved from a constipated state to clear and regular evacuation. Backache, initially reported at 6/10 on the pain scale, was reduced to 5/10.

Vital Investigations: The blood pressure values were mostly controlled, ranging between 110/70 mmHg and 110/80 mmHg, with occasional elevations up to 120/70–120/80 mmHg. These findings indicate effective maintenance of both blood pressure and weight balance.

Investigations: Biochemical investigations showed marked improvement following treatment. Urea levels decreased significantly from 222 mg/dL to 82.21 mg/dL, while serum creatinine dropped from 9.96 mg/dL to 5.05 mg/dL. Uric acid also reduced from 5.9 mg/dL to 3.0 mg/dL. Serum sodium remained stable (140.3 to 141.2 mEq/L), while potassium levels were maintained within a narrow range (5.56 to 5.58 mEq/L). Calcium decreased from 12.2 mg/dL to 9 mg/dL.

The study concludes that integrated Ayurvedic interventions in CKD produced positive clinical outcomes, including relief of symptoms, stabilization of vital signs, and significant improvements in laboratory parameters.

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