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A CLINICAL ASSESSMENT OF *AYURVEDIC* TREATMENT OUTCOMES IN A PATIENT WITH STAGE II CKD AND HYPERTENSION

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ABSTRACT

Chronic Kidney Disease (CKD) Stage II often coexists with hypertension, forming a complex bidirectional relationship that complicates treatment and worsens outcomes. This case study explores the integrative management of CKD Stage II with hypertension in a 36-year-old male patient treated at Jeena Sikho Lifecare Limited Hospital, Derabassi, India. The patient presented with complaints of generalized weakness and bilateral leg swelling. A personalized *Ayurvedic* treatment plan was administered over four months. Clinical outcomes showed significant improvement. Blood pressure normalized from a peak of 180/110 mmHg to 120/90 mmHg, and pulse rate stabilized. Global GFR improved from 65.8 to 68.1 ml/min, while serum creatinine decreased from 2.11 to 1.40 mg/dL. Hemoglobin levels rose to 11.7 gm/dL, and urea and BUN levels declined, indicating better renal and systemic function. The findings suggest that *Ayurvedic* management may offer a safe and effective approach for stabilizing CKD and associated hypertension. Although this case demonstrated encouraging outcomes, it is based on a single patient observation. To substantiate the efficacy, safety, and reproducibility of integrated *Ayurvedic* interventions in CKD with hypertension, larger-scale randomized controlled trials are essential.

KEYWORDS: *Ayurveda*, Chronic Kidney Disease (CKD), *Daruharidra*, *Guduchi*, Hypertension, *Punarnava*, *Shilajit*, *Uchcha Raktachap*, *Vrikk vikar.*

INTRODUCTION

Chronic Kidney Disease (CKD) stage II is frequently associated with hypertension, which not only contributes to kidney damage but also complicates disease progression and outcomes.[1] The relationship between CKD and hypertension is bidirectional, hypertension can both cause and result from declining kidney function.[2] Hypertension is common among CKD patients, with studies showing that approximately 46% of those with CKD stage II are affected.[3] In a cohort study, 32.35% of stage II CKD patients had systolic hypertension.[4] Uncontrolled hypertension in these patients is linked to a higher risk of mortality, with systolic blood pressure (SBP) levels above 120 mmHg associated with increased death rates.[5] Pulmonary hypertension is another concern, reported in 51.35% of CKD patients, further complicating treatment and elevating mortality risks.[4] Management strategies typically involve the use of renin-angiotensin system (RAS) inhibitors and diuretics, both effective in controlling blood pressure and reducing proteinuria.[6] However, it is also noted that not all patients with hypertension experience the same progression in kidney function decline, highlighting the

need for personalized management strategies based on individual patient factors.

In *Ayurveda*, the *Samprapti* (pathogenesis) of CKD stage II with hypertension is understood through the lens of *Dosha*, *Dhatu*, and *Srotas* imbalance.[7] The disease primarily involves vitiation of *Vata* and *Kapha doshas*, with secondary involvement of *Pitta* in some cases. The affected *Srotas* are *Mutravaha* (urinary channels), *Raktavaha* (circulatory channels), and *Medovaha* (fat tissue channels).[8] Long-standing *Agnimandya* (digestive fire suppression) and accumulation of *Ama* (metabolic toxins) initiate the pathology, leading to obstruction (*Srotorodh*) in the *Mutravaha Srotas*.[9] This results in *Mutrakshaya* (decreased urine output) and *Mutradah* (burning micturition) in early stages, progressing to *Mutraghaat* (obstructive uropathy) in advanced stages.[10]

The progressive tissue damage corresponds to *Dhatu Kshaya*, particularly of *Rakta*, *Meda*, and *Majja Dhatus*, leading to systemic weakness and renal failure features.[11] Hypertension in this context is seen as a manifestation of *Vyana Vata* and *Rakta Dushti*, often due to *Avarana* (encapsulation or occlusion) of *Vata* by *Kapha* or *Meda*.[12] *Ayurvedic* diagnosis is based on *Rog* and *Rogi Pariksha* (examination of disease and patient), involving *Dashavidh Pariksha* (ten-fold examination), *Ashta vidh Pariksha* (eight-fold examination), and pulse diagnosis (*Nadi Pariksha*), which help in assessing *doshic* predominance, tissue damage, and prognosis.[13] This comprehensive diagnostic approach guides the individualized treatment plan aimed at restoring *Dosha-Dhatu-Srotas* equilibrium. The *Samprapti Ghatak*[14,15] of this case study is mentioned in **Table 1.**

Table 1: The *Samprapti Ghatak* of this case.

Dosha (Bio-energetic forces)
• *Vata* (especially *Apana* and *Vyana Vata*) – primary involvement • *Kapha* (structure and stability) and *Pitta* (metabolism) – secondary involvement
Dushya (Affected body tissues)
• *Ras* (plasma/lymph), *Rakta* (blood), *Meda* (fat), *Mamsa* (muscle), *Majja* (bone marrow/nervous tissue) – progressive tissue depletion (*Dhatu Kshaya*)
Srotas (Body channels)
• *Mutravah Srotas* (urinary channels), *Raktavah Srotas* (blood circulation channels), *Medovah Srotas* (metabolic channels)
Srotodushti Prakar (Type of channel vitiation)
• *Sanga* (obstruction), *Siragranthi* (vascular blockage), *Vimarg gaman* (misdirection of flow)
Udabhav Sthan (Origin site)
• *Pakvashaya* (colon)
Adhisthan / Vyaktasthan (Site of manifestation)
• *Basti* (urinary system, kidneys), *Hridaya* (heart – due to *Vyana Vata* disturbance)
Rog Marg (Pathway of disease)
• *Abhyantar Rog Marg* (internal pathway)
Vyadhi Swabhav (Nature of disease)
• *Yapya* (manageable with ongoing treatment), *Chirakari* (chronic), *Krichhra Sadhya* (difficult to cure)

The *Ayurvedic* approach to managing CKD Stage II with hypertension is rooted in restoring balance among the disturbed *doshas*, primarily *Vata* and *Kapha*, and supporting the proper function of the urinary and circulatory systems.[16] Treatment emphasizes correcting the underlying imbalances responsible for obstruction and degeneration in the body, particularly addressing the dysfunction of *Vyana Vata* and the weakness of tissue metabolism (*Dhatu Kshaya*).[17] Attention is given to improving digestion and assimilation to reduce the formation of toxins (*Ama*), which can obstruct channels (*Srotas*) and aggravate disease progression.[18] Lifestyle and dietary adjustments are also integral, aimed at reducing systemic stress and maintaining physiological harmony.

OBJECTIVE

Examine the impact of *Ayurvedic* interventions in a 36-year-old male patient with CKD II and hypertension.

MATERIALS AND METHODS

I. Case Report

A 36-year-old male diagnosed with CKD stage II and hypertension presented at Jeena Sikho Lifecare Limited Hospital in Derabassi, India, on February 10, 2024. She reported experiencing general weakness and bilateral leg swelling. There was no significant family history. Findings from the initial *Ashta-vidh Pariksha* are provided in **Table 1**. The patient's vital signs recorded during the first visit are shown in **Table 2**, and the laboratory test results throughout the course of treatment are detailed in **Table 3.**

Table 1: The *Ashta vidh Pariksha* (examination) on the visits.

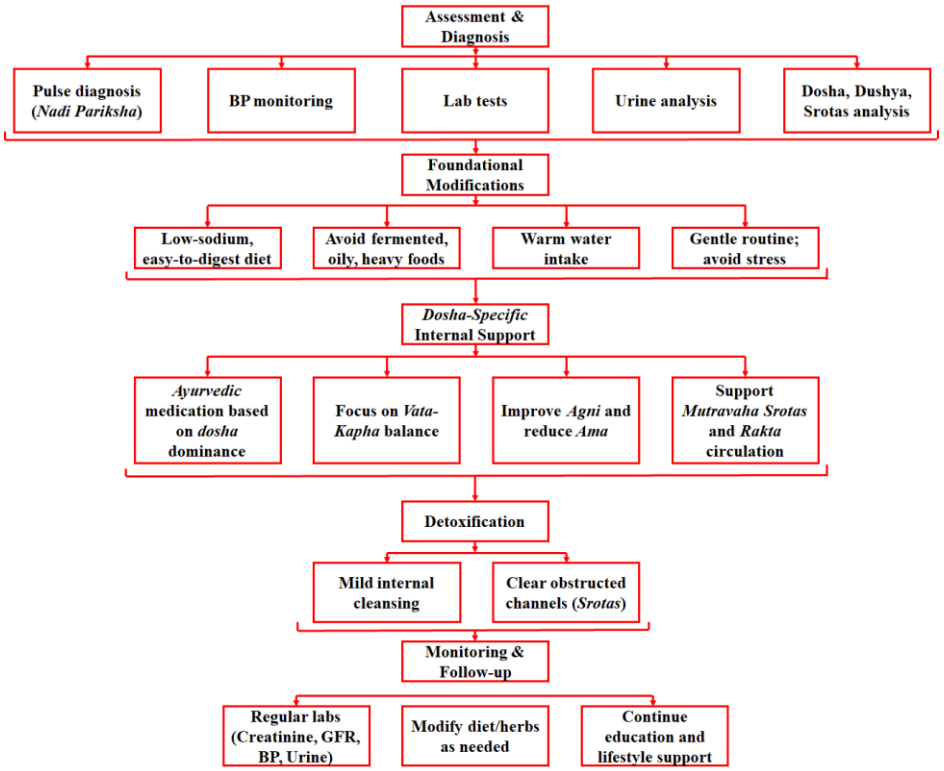
Parameter	06-01-2025
***Naadi* (Pulse)**	*Vataj Pittaj*
***Mala* (Stool)**	*Malsang* (Constipated)
***Mutra* (Urine)**	*Avikrit* (Normal)
***Jiwha* (Tongue)**	*Saam* (Coated)
***Shabda* (Voice)**	*Spashta* (Clear)
***Sparsha* (Touch)**	*Anushna sheeta* (Normal)
***Drika* (Eye)**	*Avikrit* (Normal)
***Akriti* (Physique)**	*Madhyam*

Table 2: The vitals during the initial assessment.

Date	Blood Pressure	Pulse Rate/ min	Weight
06-01-2025	152/104 mmHg	102/min	60 Kg
10-02-2025	140/90 mmHg	72/min	58 Kg
18-04-2025	180/110 mmHg	64/min	62 Kg
17-05-2025	140/100 mmHg	80/min	61 Kg
06-06-2025	120/90 mmHg	61/min	61 Kg

Table 3: The laboratory investigation reports during the treatment (Fig 2).

Parameter	Haemoglobin	Urea	BUN	Serum Creatinine	Uric Acid
06-01-2025	**11.7 gm/dL**	41.50 mg/dL	19.37 mg/dL	**1.50 mg/dL**	**7.42 mg/dL**
13-01-2025	-	30.4 mg/dL↓	14.19 mg/dL↓	**1.48 mg/dL↓**	6.79 mg/dL↓
10-02-2025	**11.6 gm/dL↓**	**50.36 mg/dL↑**	23.50 mg/dL↑	**2.11 mg/dL↑**	**8.46 mg/dL↑**
18-02-2025	**10.7 gm/dL↓**	**59.93 mg/dL↑**	**27.97 mg/dL↑**	1.52 mg/dL↓	5.29 mg/dL ↓
17-05-2025	**10.7 gm/dL↓**	35.41mg/dL ↓	16.53 mg/dL ↓	1.3 mg/dL ↓	5.47 mg/dL↑
06-06-2025	**11.7 gm/dL↑**	34.45 mg/dL ↓	16.08 mg/dL ↓	1.40 mg/dL↑	5.61 mg/dL ↑



II Treatment Plan (Fig 3).

A personalized *Ayurvedic* and Disciplined and Intelligent Person's (DIP) Diet was provided to the patient to complement the *Ayurvedic* treatments administered at Jeena Sikho Lifecare Limited Hospital for CKD[16]:

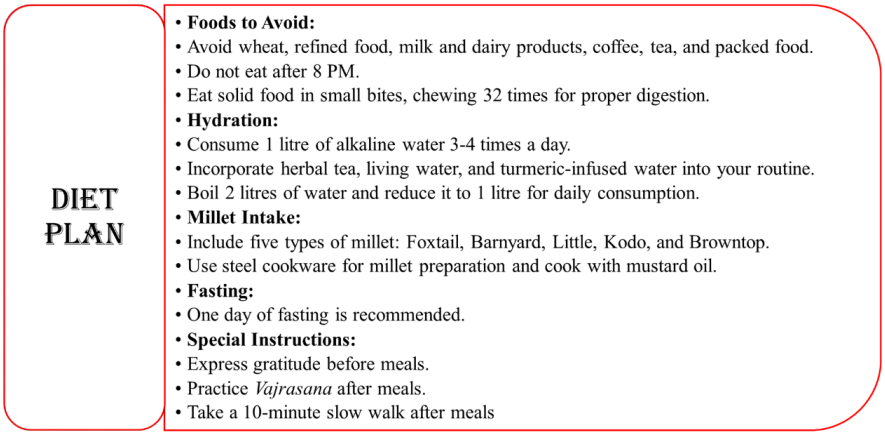


Fig 4. Diet Plan.

Fig. 5: Lifestyle Recommendations.

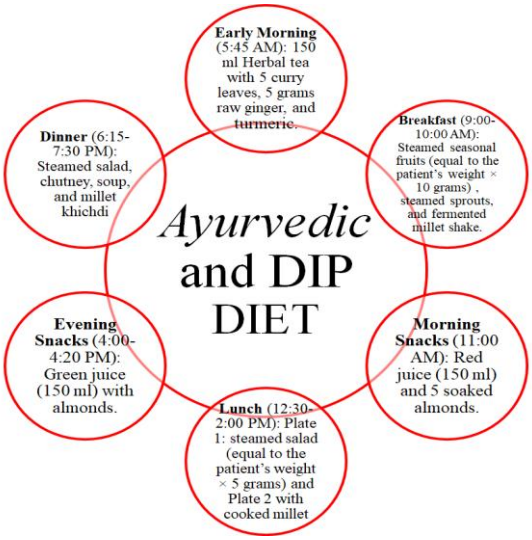


Fig 6 Meal Timing and Structure.

III. *Panchakarma* therapies.

i. *Awagah Swedan*[19]

- A tub was filled with warm water (37–40°C), ensuring the level reached up to the navel.
- The patient was made to sit comfortably in the tub, immersing the body up to the navel region.
- The procedure was continued for 40 minutes.
- After completion, the patient was helped out of the tub and dried with a clean towel.
- The patient was allowed to rest in a warm, closed room.

ii. *Punarnava Gokshur Tail Basti*[20]

- 80 ml of *Punarnava Gokshur Tail* was warmed by double boiling method to a suitable lukewarm temperature (37-40˚C).
- The patient was made to lie down in left lateral position.
- The lubricated nozzle was gently inserted into the rectum.
- The warmed *Punarnava Gokshur Tail* was administered slowly into the rectum.

- The patient was instructed to retain the oil for as long as comfortably possible.
- The patient was advised to rest in a warm, comfortable room after the procedure.

iii. *Shirodhara* with *Brahmi* oil[21]

- The patient was made to lie comfortably in a supine position on the *Droni* (treatment table).
- The forehead and scalp were gently massaged with Brahmi oil.
- Brahmi oil was warmed to a suitable lukewarm temperature (37-40˚C).
- The oil was poured in a continuous, steady stream over the center of the forehead (*Ajna Chakra* region) using a *Shirodhara* vessel.
- The procedure was continued for 30 minutes, maintaining a constant oil flow and temperature.
- After completion, excess oil was wiped off, and the patient was allowed to rest for a few minutes.
- The patient was advised to avoid exposure to cold and wind and was given appropriate dietary and lifestyle instructions.

iv. *Guduchi Taila Basti* (90 ml)[22]

- The patient was kept in left lateral position; *Guduchi Taila* (90 ml) was warmed to body temperature.
- The anal orifice was lubricated, and the warmed oil was administered slowly using a *Basti* syringe with catheter, which was then withdrawn carefully.
- The patient was advised to lie in supine position for 5–10 minutes, and retention of oil was observed under supervision.
- Post-procedure, the patient was instructed to avoid exertion, cold exposure, and suppression of urges, and was advised light, warm, easily digestible food; the procedure was well tolerated.

IV. Medicinal Interventions

a) *Ayurvedic* interventions

The *Ayurvedic* treatment employed in this case CKD Tablet, Yakrit Shoth Har Vati, Chander Vati Tablet, Maha Granthi Har Vati, Dr. BP Tablet, Dr. Kidney Care, Kidney Shuddhi Ark, Kanchnar Guggul, Kidney Care Syrup, Dhatu Poshak Capsule and Divya Shakti Powder (**Table 4**). The description of the medicines is mentioned in **Table 5**.

a) Allopathic interventions

The patient was diagnosed with hypertension and was taking Amlodipine 5 mg previously which was discontinued after starting *Ayurvedic* treatment.

Table 4: Medications taken during the treatment period.

Date	Medicines	Dosage with *Anupana*
06-01-2025 to 15-01-2025 (IPD)	CKD Tablet	1 TAB TDS (*Adhobhakta* with *koshna jala*- After meal with lukewarm water)
	CKD syrup	15 ml BD (*Adhobhakta* with *sama matra koshna jala*- After meal with equal amount of lukewarm water)
	GFR Powder	A teaspoon BD *(Adhobhakta with koshna jala)*
	Dr. Immune Tablet	1 TAB BD (*Adhobhakta* with *koshna jala*)
	Dr. BP Tablet	1 TAB BD (*Adhobhakta* with *koshna jala*)
	Divya Shakti Powder	Half a teaspoon HS *(Nishikala* with *koshna jala*- Before bed with lukewarm water)
	Granthi Har Vati	2 TAB BD (*Adhobhakta* with *koshna jala*)
15-01-2025 (Discharge)	Divya Shakti Powder	Half a teaspoon HS *(Nishikala* with *koshna jala*)
	CKD Tablet	1 TAB TDS (*Adhobhakta* with *koshna jala*)
	Kidney Shuddhi Ark	15 ml BD (*Adhobhakta* with *sama matra koshna jala)*
	Dr. Immune Tablet	1 TAB BD (*Adhobhakta* with *koshna jala*)
	Dr. BP Tablet	1 TAB BD (*Adhobhakta* with *koshna jala*)
10-02-2025	CKD Tablet	1 TAB TDS (*Adhobhakta* with *koshna jala*)
	Yakrit Shoth Har Vati	2 TAB BD (*Adhobhakta* with *koshna jala*)
	Chandervati	2 TAB BD (*Adhobhakta* with *koshna jala*)
18-04-2025	Maha Granthi Har Vati	2 TAB BD (*Adhobhakta* with *koshna jala*)
	Dr. BP Tablet	2 TAB BD (*Adhobhakta* with *koshna jala*)
	Kidney Care Tablet	1 TAB TDS (*Adhobhakta* with *koshna jala*)
	Kidney Shuddhi Ark	15 ml BD (*Adhobhakta* with *sama matra koshna jala*)
	Chandervati	2 TAB BD (*Adhobhakta* with *koshna jala*)
17-05-2025	Kanchnar Guggulu	2 TAB BD (*Adhobhakta* with *koshna jala*)
	CKD Tablet	1 TAB TDS (*Adhobhakta* with *koshna jala*)
	Kidney Care Syrup	15 ml BD (*Adhobhakta* with *sama matra koshna jala)*
	Chandervati	2 TAB BD (*Adhobhakta* with *koshna jala*)
	Dhatu Poshak Capsule	1 CAP BD (*Adhobhakta* with *koshna jala*)
	Dr. BP Tablet	2 TAB BD (*Adhobhakta* with *koshna jala*)
06-06-2025	Divya Shakti Powder	Half a teaspoon HS *(Nishikala* with *koshna jala*)
	Chandervati	2 TAB BD (*Adhobhakta* with *koshna jala*)
	Dr. Kidney Care Tablet	1 TAB TDS (*Adhobhakta* with *koshna jala*)
	Dr. BP Tablet	2 TAB BD (*Adhobhakta* with *koshna jala*)
	Dhatu Poshak Capsule	2 CAP BD (*Adhobhakta* with *koshna jala*)
	Kidney Shuddhi Ark	15 ml BD (*Adhobhakta* with *sama matra koshna jala)*

Table 5: The Description of Medications taken during the treatment period.

Medicine Name	Ingredients	Therapeutic Effects
CKD Syrup	***Kasani*** *(Cichorium intybus),* ***Gokshur*** *(Tribulus terrestris),* ***Shatavari*** *(Asparagus racemosus),* ***Giloy*** *(Tinospora cordifolia),* ***Sorbitol*** *, and* ***Shuddh Shilajit*** *(Asphaltum punjabianum)*	*Raktashodhak* (Blood purifier), *Virechana* (Purgative), *Mutral* (Diuretic), *Agnideepan* (Digestive stimulant), *Rasayana* (Rejuvenator), *Shoth har* (Anti-inflammatory), *Pitta Shaman (Pitta* pacifier), *Kaphashodhana (Kapha* eliminator), *Srotoshodhana* (Channel cleanser)
GFR Powder	***Punarnava*** *(Boerhavia diffusa),* ***Gokshur*** *(Tribulus terrestris),* ***Kaasni*** *(Cichorium intybus),* ***Bhoomi Amla*** *(Phyllanthus niruri),* ***Badi Hard*** *(Terminalia chebula),* ***Makoy*** *(Solanum nigrum) and* ***Apamarg*** *(Achyranthes aspera)*	*Mutral* (Diuretic), *Shoth har* (Anti-inflammatory), *Virechana* (Purgation), *Raktaprasadana* (Blood purifier), *Vatanulomana (Vata* regulator), *Mutravirechana* (Urinary purgation), *Rasayana* (Rejuvenator), *Amapachan* (Toxin digestant), *Kledahara* (Moisture remover), *Vrikkadoshahara* (Kidney toxin eliminator)
Dr. Immune tablet	***Kesar*** *(Crocus sativus),* ***Shudh Kuchla*** *(Strychnos nux-vomica),* ***Ashwagandha Ext.*** *(Withania somnifera),* ***Shatawari Ext.*** *(Asparagus racemosus),* ***Pipali*** *(Piper longum),* ***Tulsi*** *(Ocimum sanctum),* ***Laung*** *(Syzygium aromaticum),* ***Choti Elaichi*** *(Elettaria cardamomum),* ***Sonth*** *(Zingiber officinale),* ***Haldi*** *(Curcuma longa),* ***Loh Bhasma*** *(Ferrum),* ***Swaran Makshik Bhasma*** *(Chalcopyrite),* ***Mukta Shukti Bhasma*** *(Pinctada margaritifera)*	*Ojas Vardhaka* (Vitality enhancer), *Rasayana* (Rejuvenator), *Vyadhi Kshamatva* (Immunity booster), *Shoth har* (Anti-inflammatory), *Raktashodhak* (Blood purifier), *Deepan* (Appetizer), *Balya* (Strength promoter)
Granthi Har Vati	***Kachnar*** *(Bauhinia variegata),* ***Guggul*** *(Commiphora wightii),* ***Amalki*** *(Phyllanthus emblica), V****ibhitik*** *(Terminalia bellirica),* ***Haritiki*** *(Terminalia chebula),* ***Shunti*** *(Zingiber officinale),* ***Marich*** *(Piper nigrum),* ***Pippal*** *(Piper longum),* ***Varuna*** *(Crateva religiosa),* ***Sukshamala*** *,* ***Dalchini*** *(Cinnamomum verum), and* ***Tamal Patar*** *(Cinnamomum tamala)*	*Lekhana* (scraping), *Stambhana* (astringent), *Shoth har* (anti-inflammatory), *Vedanasthapana* (analgesic), *Kapha-Vata Shaman* (pacifying *Kapha* and *Vata doshas).*
Chander Vati 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).*	*Vata-Pitta Shaman* (Dosha pacifier), *Raktashodhan* (Blood purifier), *Vrikk dhara* (Kidney tonic), *Shoth har* (Anti-inflammatory), *Mutral* (Diuretic)
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 sativus),* ***Ajwain*** *(Trachyspermum ammi),* ***Mandur Bhasma*** *(Ferrum).*	*Raktashodhak (* Blood purifier), *Deepan* (Appetizer), *Pachan* (Digestant), *Shoth har* (Anti-inflammatory), *Vata-kapha shamak (* Dosha-balancer), *Rasayana* (Rejuvenator), *Ojovardhak* (Immunity enhancer)

Chander Vati	***Kapoor Kachri*** *(Hedychium spicatum),* ***Vacha*** *(Acorus calamus),* ***Motha*** *(Cyperus rotundus),* ***Kalmegh*** *(Andrographis paniculata),* ***Giloy*** *(Tinospora cordifolia),* ***Devdaru*** *(Cedrus deodara),* ***Desi Haldi*** *(Curcuma longa),* ***Atees*** *(Aconitum heterophyllum),* ***Daru Haldi*** *(Berberis aristata),* ***Pipla Mool*** *(Piper longum root),* ***Chitrak*** *(Plumbago zeylanica),* ***Dhaniya*** *(Coriandrum sativum),* ***Harad*** *(Terminalia chebula),* ***Bahera*** *(Terminalia bellirica),* ***Amla*** *(Phyllanthus emblica),* ***Chavya*** *(Piper chaba),* ***Vayavidang*** *(Embelia ribes),* ***Pippal*** *(Piper longum),* ***Kalimirch*** *(Piper nigrum),* ***Saunth*** *(Zingiber officinale dried ginger),* ***Gaj Pipal*** *(Scindapsus officinalis),* ***Swarn Makshik Bhasm*** *(Gold iron pyrite ash - Ayurvedic preparation),* ***Sajjikshar*** *(Potassium carbonate - traditional alkali preparation),* ***Sendha Namak*** *(Rock salt),* ***Kala Namak*** *(Black salt),* ***Choti Elaichi*** *(Elettaria cardamomum - small cardamom),* ***Dalchini*** *(Cinnamomum verum),* ***Tejpatra*** *(Cinnamomum tamala),* ***Danti*** *(Baliospermum montanum),* ***Nishothra*** *(Operculina turpethum),* ***Vanslochan*** *(Bamboo silica),* ***Loh Bhasm*** *(Iron ash - Ayurvedic preparation),* ***Shilajeet*** *(Asphaltum punjabinum),* ***Guggul*** *(Commiphora wightii).*	*Raktashodhan* (Blood purifier), *Pitta Shaman* (Pitta pacifier), *Deepan* (Appetizer), *Pachan* (Digestant), *Vata-Pitta Shaman* (Dosha pacifier)
Maha Granthi Har Vati	***Parad Bhasm*** *(Mercury),* ***Gandhak*** *(Sulfur),* ***Vang Bhasm*** *(Zinc),* ***Taabr Bhasm*** *(Copper),* ***Kash Bhasm*** *(Potassium),* ***Hartal Bhasm*** *(Realgar),* ***Nilla Thotha*** *(Copper sulfate),* ***Shankh Bhasm*** *(Conch shell powder),* ***Kodi Bhasm*** *(Cuttlefish bone),* ***Loh Bhasm*** *(Iron),* ***Sonth*** *(Zingiber officinale),* ***Kalimirch*** *(Piper nigrum),* ***Pippal*** *(Piper longum),* ***Harad*** *(Terminalia chebula),* ***Bahera*** *(Terminalia bellirica),* ***Amla*** *(Phyllanthus emblica),* ***Chavya*** *(Piper chaba),* ***Kachur*** *(Curcuma zedoaria),* ***Vayavdanga*** *(Tribulus terrestris),* ***Pippla Mool*** *(Piper longum root),* ***Patha*** *(Cyclea peltata),* ***Hau Ber*** *(Ziziphus mauritiana),* ***Vacha*** *(Acorus calamus),* ***Choti Ilaychi*** *(Elettaria cardamomum),* ***Devdaru*** *(Cedrus deodara),* ***Samundar Namak*** *(Rock salt),* ***Senda Namak*** *(Sendha salt),* ***Sambar Namak*** *(Sambhar salt),* ***Vid Namak*** *(Black salt),* ***Kala Namak*** *(Black salt),* ***Vidari*** *(Pueraria tuberosa).*	*Granthi/Arbud* (Cyst/Tumor), *Lekhana* (Scraping/Reducing excess tissue), *Shoth har* (Anti-inflammatory), *Raktashodhak* (Blood purifier), *Vedanasthapana* (Pain reliever)
Dr. BP Tablet	***Shankhpushpi*** *(Convolvulus pluricaulis),* ***Shatavari*** *(Asparagus racemosus),* ***Ashwagandha*** *(Withania somnifera),* ***Brahmi*** *(Bacopa monnieri),* ***Vacha*** *(Acorus calamus),* ***Sarpagandha*** *(Rauvolfia serpentina),* ***Jeera*** *(Cuminum cyminum),* ***Giloy*** *(Tinospora cordifolia),* ***Malabar Nut*** *(Justicia adhatoda),* ***Jatamansi*** *(Nardostachys jatamansi),* ***Mukta Pishti*** *(Purified Pearl Calcium -* $CaCO_3$*).*	*Uttara vata Shaman* (Pelvic Vata pacifier), *Rakta gata pitta Shaman* (Bloodborne *Pitta* pacifier), *Raktashodhana* (Blood purifier), *Vata-pitta Shaman (Vata-Pitta* pacifier), *Hridaya rog nivaran (* Heart disease reliever), *Shoth har* (Anti-inflammatory),
Dr. Kidney Care	***Gokshur*** *(Tribulus terrestris),* ***Apamarg*** *(Achyranthes aspera),* ***Mulethi*** *(Glycyrrhiza glabra),* ***Punarnava*** *(Boerhavia diffusa),* ***Varun Chhal*** *(Crataeva nurvala),* ***Sheetal Chini*** *(Piper cubeba)*	*Mutral* (Diuretic), *Shoth har* (Anti-inflammatory), *Ashmarighna* (Lithotriptic), *Agnivardhak* (Carminative), *Rasayana* (Rejuvenator), *Vatanuloman* (Carminative)
Kidney Shuddhi Ark	***Punarnava*** *(Boerhavia diffusa),* ***Gokshur*** *(Tribulus terrestris),* ***Varuna*** *(Crataeva nurvala),* ***Bhumyamalaki*** *(Phyllanthus niruri),* ***Ashwagandha*** *(Withania somnifera),* ***Amla*** *(Emblica officinalis),* ***Shatavari*** *(Asparagus racemosus),* ***Turmeric*** *(Curcuma longa),* ***Saffron.***	*Mutral* (Diuretic), *Shoth har* (Anti-inflammatory), *Mutravirechana* (Urinary purgation), *Raktaprasadana* (Blood purifier), *Kledahara* (Moisture remover), *Amapachan* (Toxin digestant), *Vrikk doshahar* (Kidney toxin eliminator), *Rasayana* (Rejuvenator), *Vatanuloman (Vata* regulator)
Kanchnar Guggulu	***Kachnar Chhal*** *(Bauhinia variegata),* ***Haritaki*** *(Terminalia chebula),* ***Bibhitaki*** *(Terminalia bellirica),* ***Amalaki*** *(Emblica officinalis),* ***Shunthi*** *(Zingiber officinale),* ***Marich*** *(Piper nigrum),* ***Pippali*** *(Piper longum),* ***Varun Chhal*** *(Crataeva nurvala),* ***Ela*** *(Elettaria cardamomum),* ***Dalchini*** *(Cinnamomum zeylanicum),* ***Tejpatra*** *(Cinnamomum tamala),* ***Shuddha Guggulu*** *(Commiphora mukul)*	*Lekhan* (scraping/reducing), *Śhoth har* (anti-inflammatory), *Deepan-Pachan* (digestive and carminative), *Medohar* (anti-obesity/lipolytic)

Kidney Care Syrup	***Punarnavarishta, Chandanasava, Ushirasava and Gokshuradi Kadha***	*Vata-Pitta Shaman* (Pacifier of *Vata* and *Pitta doshas*), *Raktashodhak* (Blood purifier), *Shoth har* (Anti-inflammatory), *Mutra Vardhak* (Promoter of urine flow), *Srotoshodhak* (Channel purifier)
Dhatu Poshak Capsule	***Chuna Shuddh, Shankh Bhasm, Mukta Shukti, Prawal Pishti, Kapardika and Loh***	*Dhatuposhak* (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 / Lipolytic)
Divya Shakti Powder	***Trikatu***, ***Triphala***, ***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)

RESULT

Following four months of treatment, the patient showed significant improvement in symptoms, indicating that the interventions applied were effective in managing CKD and hypertension. Additionally, the reduction in weakness and swelling in B/L legs further supports the efficacy of the *Ayurvedic* approach used in this case. The conditions during the admission and discharge are mentioned in **Table 6**. The DTPA scan reports are mentioned in **Table 7 (Fig 7).**

Table 6: The conditions during the admission and discharge.

Conditions	During Admission	During discharge
Weakness	Severe	Relief
Swelling in B/L legs	3˚	1˚
Weakness Scale		
***Pravar Bala* / No Weakness**	***Madhyam Bala* / Slight Weakness**	***Yuktikrit Bala* / Mild Weakness**	***Avar Bala* / Marked Weakness**	***Akalaja Bala* / Severe Weakness**

Table 7: The DTPA scan reports.

Date	13-01-2025		07-06-2025	
Kidney	**Right**	**Left**	**Right**	**Left**
GFR	31.0 ml/min	34.8 ml/min	33.3 ml/min	34.8 ml/min
Split function	47%	53%	49%	51%
Global GFR	65.8 ml/min		68.1 ml/min	

DISCUSSION

This case report details the integrative *Ayurvedic* management of a 36-year-old male patient diagnosed with CKD and associated hypertension. Upon presentation, the patient exhibited symptoms including generalized weakness and bilateral oedema, which are commonly observed in progressive renal dysfunction. The therapeutic approach involved a combination of *Ayurvedic* internal medications and dietary modifications, customized to address the patient's *Prakriti* (constitution), *Doshic* imbalance, and disease stage. The underlying *Ayurvedic* pathogenesis (*Samprapti*) of the condition, which integrates the concepts of *Dosha Dushti*, *Dhatu Kshaya*, and *Srotorodh*, has been illustrated in **Fig. 8**, referencing classical *Ayurvedic* frameworks.[23,24]

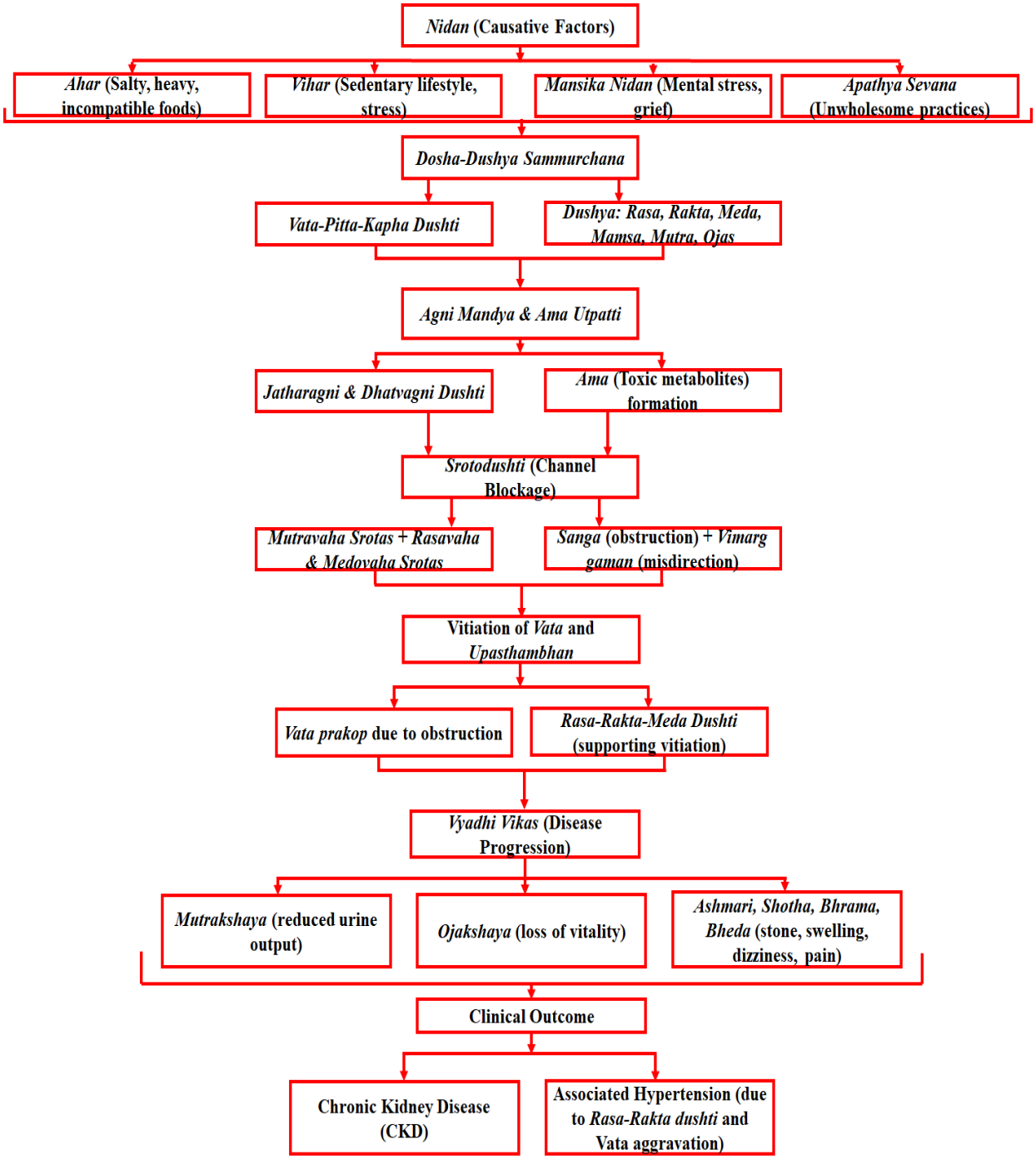


Fig. 8: The *samprapti* for this study.

1. The *Samprapti*

CKD with Hypertension is a result of *Nidan Sevana* (consumption of causative factors) such as *Ati-Lavana, Guru, Abhishyandi Ahara*, and *Avyaayama, Ratrijagarana*, leading to *Tridosha Prakopa*, predominantly *Vata-Kapha*.[25] This leads to *Agnimandya* (suppression of *Jatharagni* and *Dhatvagni*), causing *Ama Utpatti*.[26] The accumulated *Ama* obstructs the *Mutravaha Srotas*, along with *Rasavaha* and *Medovaha Srotas*, resulting in *Srotorodha*.[27] This *Margavarana* (obstruction) provokes *Vata*, particularly *Apana Vayu*, disturbing its normal *Gati* and causing *Mutrakshaya, Mutraghata*, and *Mutradourbalya*.[28]

The continuous obstruction and *dosha-dushya sammurchana* vitiate *Rasa, Rakta, Meda, Mamsa, Mutra*, and *Ojas*, leading to *Ojakshaya* and *Dhatukshaya*.[29] The *Rakta vaha srotodushti* contributes to *Uchcha Raktachap* (Hypertension) due to increased *Rasa-Rakta abaddhata*. Clinically, this manifests as *Shoth, Shrama, Phenil mutrata, Mutra alpata, Bhrama*, and *Raktapradurbhava*.[30] Over time, the disease progresses into a *Kṛchchhra-sadhya vyadhi* requiring a *Shaman* and *Rasayana* based approach.[31]

2. The *Nidan*

In *Ayurveda*, *Nidan* refers to the causative factors responsible for the initiation and progression of disease.[32] In the context of CKD with Hypertension, common *Nidanas* include *Ati-Lavana Sevan* (excessive salt intake), guru and *Abhojya Ahara* (heavy and incompatible food), *Ajirna Bhojan* (eating with poor digestion), *Mandagni* (weak digestive fire), *Avyaayaam* (lack of exercise), *Ratrijagarana* (night waking), *Divaswapa* (day sleep), and *Manasik Nidan* such as *Chinta* (worry) and *Shoka* (grief).[33] These factors aggravate *Tridoshas*, especially *Vata* and *Kapha*, impair Agni, and contribute to *Ama Utpatti*, leading to *Srotodushti* and eventually resulting in CKD and Hypertension.[34]

Nidan Parivarjan is the foremost principle of treatment in *Ayurveda*, which emphasizes the elimination or avoidance of these causative factors to break the disease cycle.[35] In this case, it involves adopting a *Pathya Ahar-Vihar* (wholesome diet and lifestyle), reducing salt and protein intake, avoiding sedentary habits, maintaining regular sleep, and managing stress through *Manasik Shuddhi* (mental clarity). *Nidan Parivarjan* not only helps to prevent disease progression but also enhances the effectiveness of therapeutic interventions and supports *Dosha Shaman* and *Dhatu Poshana* (balance and nourishment of body tissues).

3. The effects of *Panchakarma* therapies

In CKD, *Panchakarma* therapies such as *Awagah Swedana*, *Punarnava Gokshur Taila Basti*, *Shirodhara* with *Brahmi* oil, and *Guduchi Taila Basti* provide multi-dimensional benefits. *Awagah Swedana* promotes gentle sweating, enhances circulation, aids detoxification, reduces fluid retention, and alleviates stiffness while providing relaxation.[19] *Punarnava Gokshur Taila Basti* delivers local anti-inflammatory and diuretic effects, pacifies *Vata* and *Kapha*, facilitates elimination of accumulated toxins, and supports renal tissue regeneration.[20] *Shirodhara* with Brahmi oil induces deep relaxation, balances *Vata*, exerts neuroprotective and antioxidant effects, and helps regulate blood pressure and sympathetic activity, indirectly benefiting renal function.[21] *Guduchi Taila Basti* acts as a *Rasayana* and immunomodulator, promotes detoxification, enhances metabolic efficiency, and supports kidney tissue repair.[22] Collectively, these therapies improve fluid balance, reduce inflammation, rejuvenate renal tissues, and enhance overall systemic and mental well-being in CKD patients.

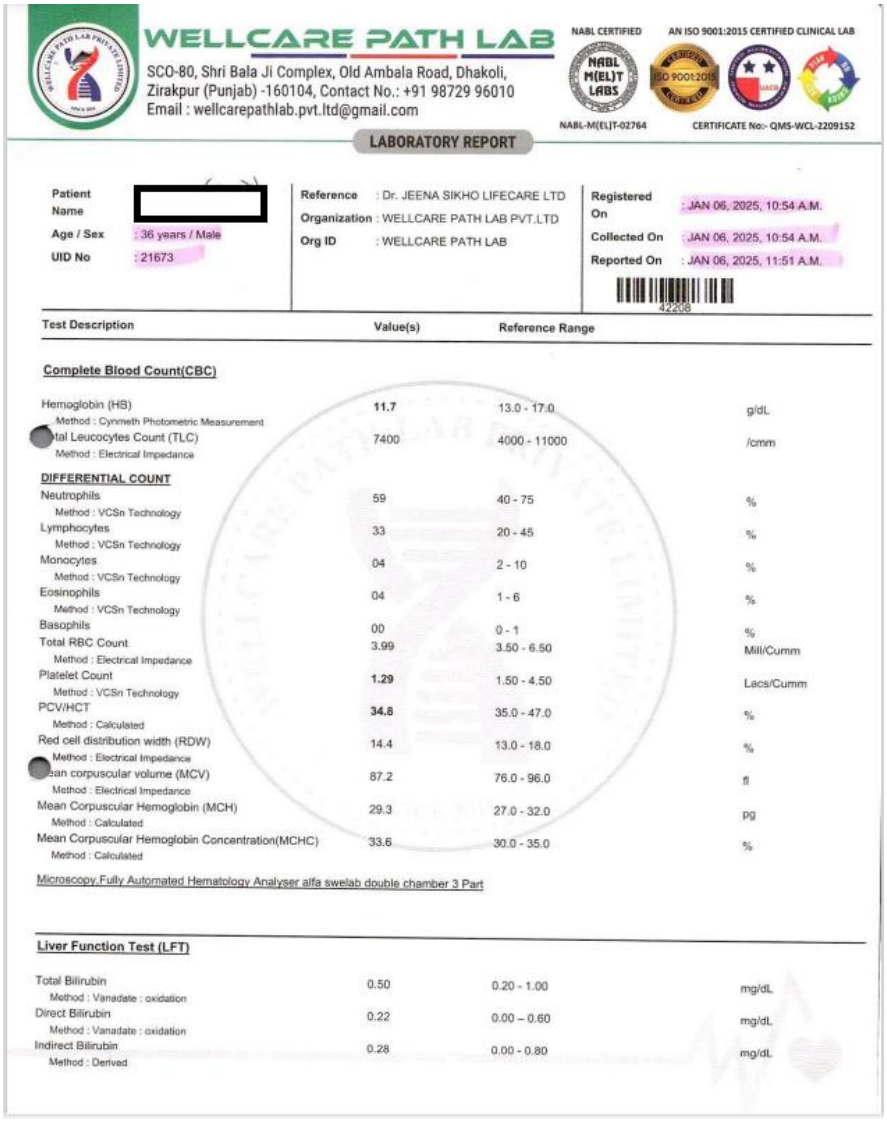
4. The effects of *Ayurvedic* medications

The *Ayurvedic* management of CKD with hypertension targets multiple levels of the disease *Samprapti*, aiming to break the pathological chain. Chander Vati Tablet acts as an Agnivardhak and *Mutral*, helping to correct *Agnimandya*, digest *Ama*, and restore the flow through *Mutravaha srotas*. Yakrit Shoth Har Vati works as a *Shothahara* and *Raktashodhak*, supporting liver function (*Yakrituttejaka*) and aiding in the removal of metabolic toxins that contribute to *Rakta Dushti* and hypertension. Maha Granthi Har Vati acts through *Lekhan* and *Kapha-Vata Shaman*, reducing *Granthi* (fibrotic/cystic formations) and *Meda Dushti*, thereby supporting kidney structure. Dr. BP Tablet helps to control hypertension through *Vatanuloman*, *Raktashodhan*, and *Hridaya Balya* properties, pacifying Vyana Vayu and stabilizing *Rakta Dhatu*. Dr. Kidney Care offers a broad-spectrum effect with *Mutral*, *Shoth-har*, *Ashmarighna*, and *Rasayana* actions, targeting *Srotorodh*, oedema, urinary flow, and *Dhatu* rejuvenation. Kidney Shuddhi Ark supports detoxification and corrects *Mutravaha Srotodushti*, while Kanchnar Guggul aids in reducing glandular swelling and *Meda Granthi*, acting as a *Lekhan* and *Shoth-har*. Kidney Care Syrup supports urine flow, soothes Pitta, and balances *Vata-Kapha*. Dhatu Poshak Capsule acts as a *Rasayana* and *Balya*, promoting *Dhatu Pushti* and addressing *Ojakshaya*, while Divya Shakti Powder supports overall systemic balance, *Agni Deepana*, and *Dhatu* nourishment. CKD Syrup provides *Raktashodhak*, *Mutral*, *Virechana*, *Shoth-har*, *Pitta* pacifying, *Kapha* eliminating, and *Srotoshodhana* actions. GFR Powder aids diuresis, anti-inflammation, urinary purgation, *Vata* regulation, detoxification, and renal rejuvenation. Dr. Immune Tablet enhances *Ojas*, immunity, strength, digestion, blood purification, and *Rasayana* effects, while Granthi Har Vati contributes *Lekhana*, *Stambhana*, *Shoth-har*, analgesic, and *Kapha-Vata* pacifying actions. Together, these formulations act synergistically to restore *Agni*, eliminate *Ama*, correct *Srotodushti*, pacify *Vata-Pitta*, rejuvenate affected *Dhatus*, improve renal structure and function, and effectively break the *Samprapti* of CKD with hypertension.

The *Rasa Panchak* of key *Ayurvedic* herbs used in CKD with hypertension reflects their potent therapeutic action. Most, like *Punarnava*[36], *Gokshur*[37], and *Guduchi*[38], are *Tikta* (bitter) and *Kashaya* (astringent) in *Rasa*, with *Laghu* (light) and *Ruksha* (dry) *Guna*, *Sheet* (cool) or *Ushna* (hot) *Veerya*, and *Katu Vipak*. These properties help reduce *Kapha* and *Pitta*, promote diuresis, detoxification, and support renal tissue repair. Their *Prabhava* (specific action) includes *Mutral* (diuretic) and *Shoth-har* (anti-inflammatory) effects, aligning with the *Ayurvedic* approach to managing kidney dysfunction and associated hypertension, which is mentioned in **Table 8.**

Table 8: The *Ras Panchaka* of the common key ingredients.

Ingredient	Rasa (Taste)	Guna (Qualities)	Veerya (Potency)	Vipaka (Post-digestive Effect)	Prabhava (Specific Action)	Present In
Punarnava *(Boerhavia diffusa)*	*Tikta* , *Kashaya* (bitter, astringent)	*Laghu* , *Ruksha* (light, dry)	*Ushna* (hot)	*Katu* (pungent)	*Mutral* , *Shoth har*	Chander Vati, Yakrit Shoth Har Vati
Palash *(Butea monosperma)*	*Tikta* , *Kashaya* (bitter, astringent)	*Laghu* , *Ruksha* (light, dry)	*Ushna* (hot)	*Katu* (pungent)	*Shoth har* , *Mutral*	Dr. Kidney Care, Divya Shakti Powder
Daruharidra *(Berberis aristata)*	*Tikta* , *Kashaya* (bitter, astringent)	*Laghu* , *Ruksha* (light, dry)	*Ushna* (hot)	*Katu* (pungent)	*Krimighna* , *Raktashodhak*	Chander Vati, Yakrit Shoth Har Vati
Guduchi *(Tinospora cordifolia)*	*Tikta* (bitter)	*Laghu* , *Snigdha* (light, unctuous)	*Ushna* (hot)	*Madhur* (sweet)	*Rasayana* , *Tridoshaghna*	Chander Vati , Dr. Kidney Care
Haridra *(Curcuma longa)*	*Tikta* , *Katu* (bitter, pungent)	*Laghu* , *Ruksha* (light, dry)	*Ushna* (hot)	*Katu* (pungent)	*Shoth har* , *Raktashodhak*	Chander Vati , Yakrit Shoth Har Vati
Shilajit *(Asphaltum)*	*Katu* , *Tikta* (pungent, bitter)	*Laghu* , *Ruksha* (light, dry)	*Ushna* (hot)	*Katu* (pungent)	*Yogavahi* , *Rasayana* , *Vrishya*	Chander Vati, Dr. Kidney Care



WELLCARE PATH LAB

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Email : wellcarepathlab.pvt.ltd@gmail.com

NABL CERTIFIED — NABL-M(EL)T-02764 — AN ISO 9001:2015 CERTIFIED CLINICAL LAB — CERTIFICATE No:- QMS-WCL-2209152

LABORATORY REPORT

Patient Name : [redacted]
Age / Sex : 36 years / Male
UID No : 21673

Reference : Dr. JEENA SIKHO LIFECARE LTD
Organization : WELLCARE PATH LAB PVT.LTD
Org ID : WELLCARE PATH LAB

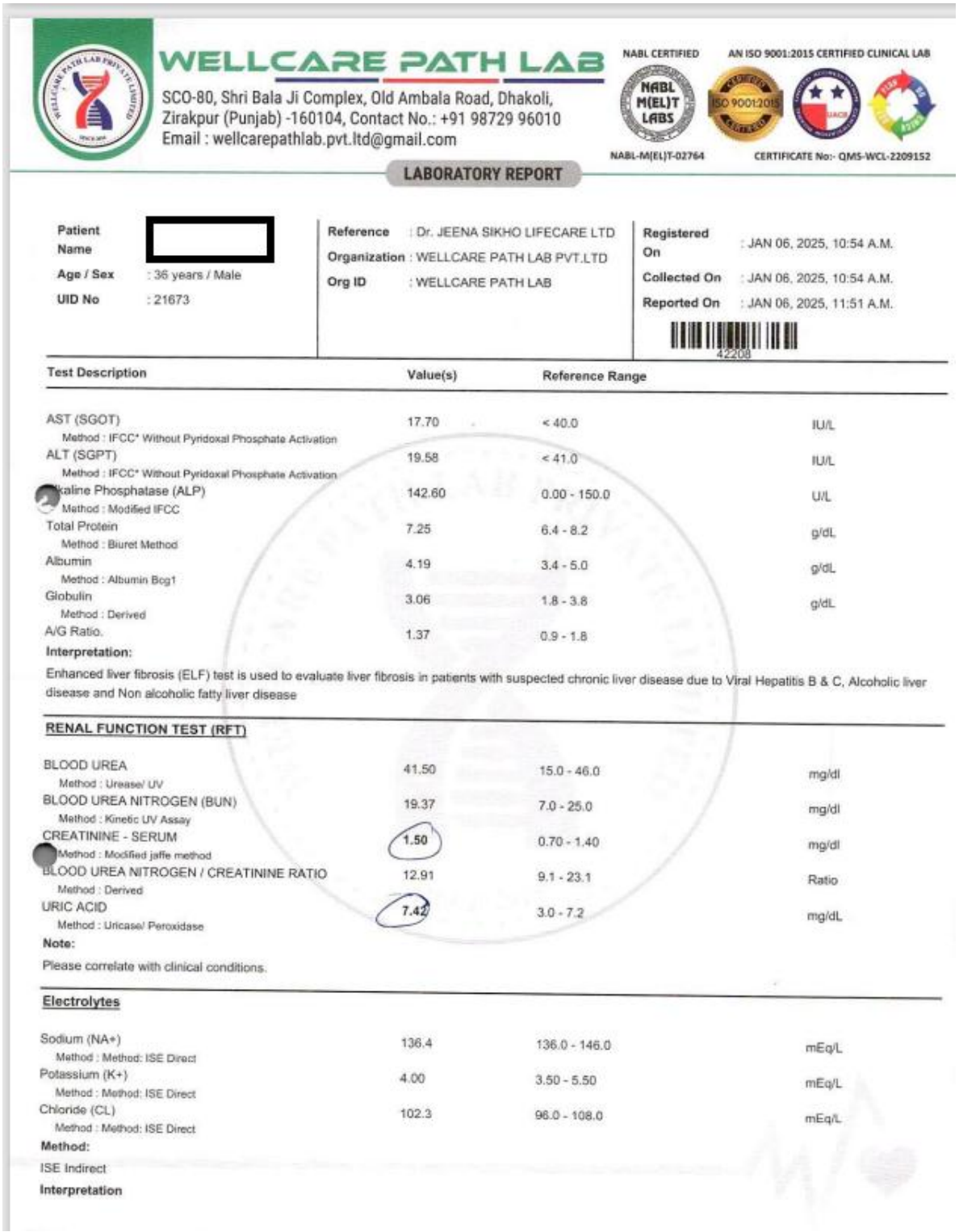
Registered On : JAN 06, 2025, 10:54 A.M.
Collected On : JAN 06, 2025, 10:54 A.M.
Reported On : JAN 06, 2025, 11:51 A.M.

42208

Test Description	Value(s)	Reference Range	
Complete Blood Count(CBC)			
Hemoglobin (HB)	11.7	13.0 - 17.0	g/dL
Method : Cynmeth Photometric Measurement			
Total Leucocytes Count (TLC)	7400	4000 - 11000	/cmm
Method : Electrical Impedance			
DIFFERENTIAL COUNT			
Neutrophils	59	40 - 75	%
Method : VCSn Technology			
Lymphocytes	33	20 - 45	%
Method : VCSn Technology			
Monocytes	04	2 - 10	%
Method : VCSn Technology			
Eosinophils	04	1 - 6	%
Method : VCSn Technology			
Basophils	00	0 - 1	%
Total RBC Count	3.99	3.50 - 6.50	Mill/Cumm
Method : Electrical Impedance			
Platelet Count	1.29	1.50 - 4.50	Lacs/Cumm
Method : VCSn Technology			
PCV/HCT	34.8	35.0 - 47.0	%
Method : Calculated			
Red cell distribution width (RDW)	14.4	13.0 - 18.0	%
Method : Electrical Impedance			
Mean corpuscular volume (MCV)	87.2	76.0 - 96.0	fl
Method : Electrical Impedance			
Mean Corpuscular Hemoglobin (MCH)	29.3	27.0 - 32.0	pg
Method : Calculated			
Mean Corpuscular Hemoglobin Concentration(MCHC)	33.6	30.0 - 35.0	%
Method : Calculated			

Microscopy,Fully Automated Hematology Analyser alfa swelab double chamber 3 Part

Liver Function Test (LFT)			
Total Bilirubin	0.50	0.20 - 1.00	mg/dL
Method : Vanadate : oxidation			
Direct Bilirubin	0.22	0.00 – 0.60	mg/dL
Method : Vanadate : oxidation			
Indirect Bilirubin	0.28	0.00 - 0.80	mg/dL
Method : Derived			



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LABORATORY REPORT

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Age / Sex	: 36 years / Male	Organization	: WELLCARE PATH LAB PVT.LTD	Collected On	: JAN 06, 2025, 10:54 A.M.
UID No	: 21673	Org ID	: WELLCARE PATH LAB	Reported On	: JAN 06, 2025, 11:51 A.M.

42208

Test Description	Value(s)	Reference Range	
AST (SGOT) Method : IFCC* Without Pyridoxal Phosphate Activation	17.70	< 40.0	IU/L
ALT (SGPT) Method : IFCC* Without Pyridoxal Phosphate Activation	19.58	< 41.0	IU/L
Alkaline Phosphatase (ALP) Method : Modified IFCC	142.60	0.00 - 150.0	U/L
Total Protein Method : Biuret Method	7.25	6.4 - 8.2	g/dL
Albumin Method : Albumin Bcg1	4.19	3.4 - 5.0	g/dL
Globulin Method : Derived	3.06	1.8 - 3.8	g/dL
A/G Ratio.	1.37	0.9 - 1.8	

Interpretation:

Enhanced liver fibrosis (ELF) test is used to evaluate liver fibrosis in patients with suspected chronic liver disease due to Viral Hepatitis B & C, Alcoholic liver disease and Non alcoholic fatty liver disease

RENAL FUNCTION TEST (RFT)

BLOOD UREA Method : Urease/ UV	41.50	15.0 - 46.0	mg/dl
BLOOD UREA NITROGEN (BUN) Method : Kinetic UV Assay	19.37	7.0 - 25.0	mg/dl
CREATININE - SERUM Method : Modified jaffe method	1.50	0.70 - 1.40	mg/dl
BLOOD UREA NITROGEN / CREATININE RATIO Method : Derived	12.91	9.1 - 23.1	Ratio
URIC ACID Method : Uricase/ Peroxidase	7.42	3.0 - 7.2	mg/dL

Note:

Please correlate with clinical conditions.

Electrolytes

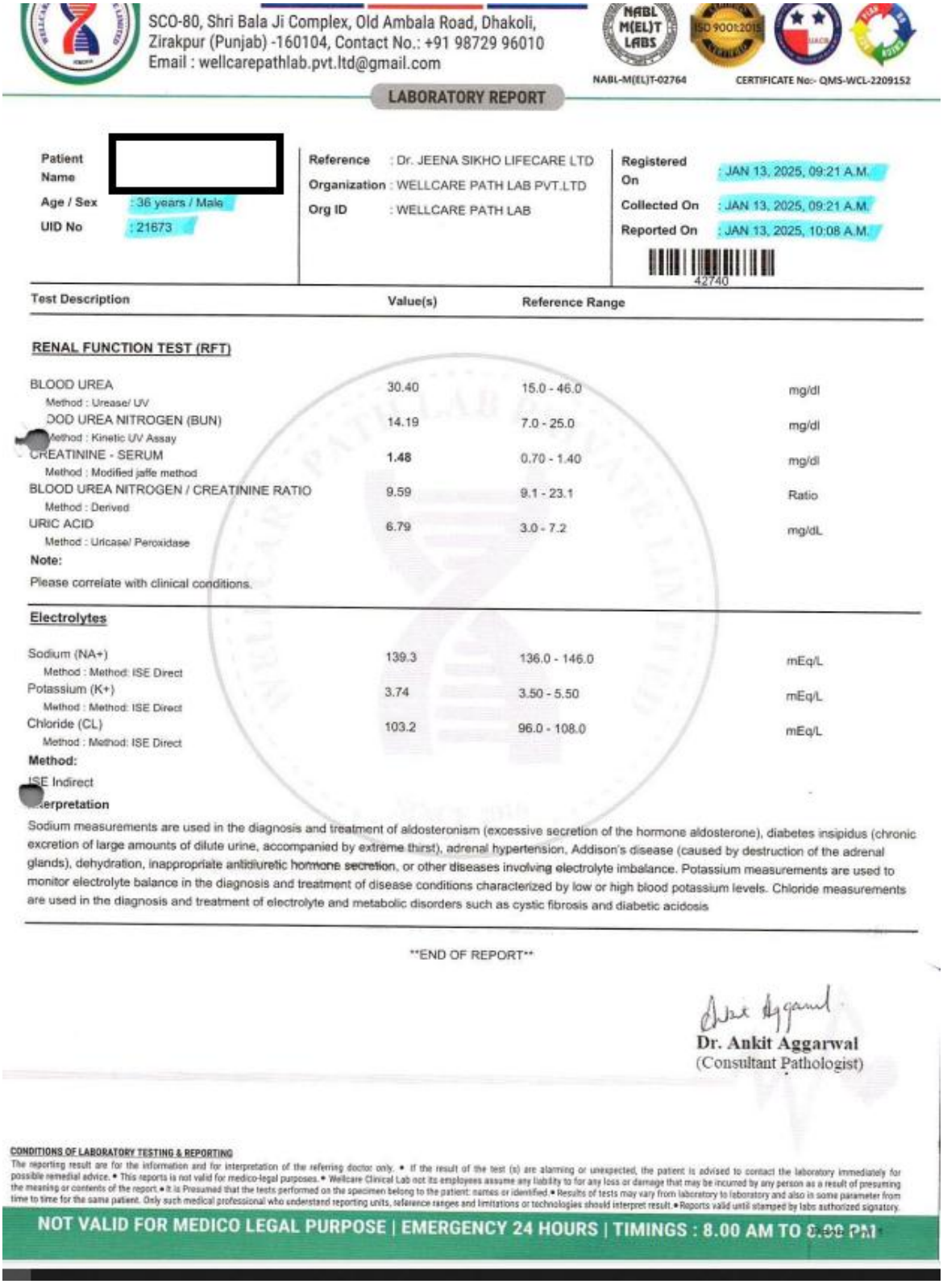
Sodium (NA+) Method : Method: ISE Direct	136.4	136.0 - 146.0	mEq/L
Potassium (K+) Method : Method: ISE Direct	4.00	3.50 - 5.50	mEq/L
Chloride (CL) Method : Method: ISE Direct	102.3	96.0 - 108.0	mEq/L

Method:

ISE Indirect

Interpretation

Fig 2: The laboratory investigation reports before and after treatment.



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Email : wellcarepathlab.pvt.ltd@gmail.com

NABL-M(EL)T-02764 CERTIFICATE No:- QMS-WCL-2209152

LABORATORY REPORT

Patient Name	[redacted]	Reference : Dr. JEENA SIKHO LIFECARE LTD	Registered On : JAN 13, 2025, 09:21 A.M.
Age / Sex	: 36 years / Male	Organization : WELLCARE PATH LAB PVT.LTD	Collected On : JAN 13, 2025, 09:21 A.M.
UID No	: 21673	Org ID : WELLCARE PATH LAB	Reported On : JAN 13, 2025, 10:08 A.M.

42740

Test Description	Value(s)	Reference Range	
RENAL FUNCTION TEST (RFT)			
BLOOD UREA Method : Urease/ UV	30.40	15.0 - 46.0	mg/dl
BLOOD UREA NITROGEN (BUN) Method : Kinetic UV Assay	14.19	7.0 - 25.0	mg/dl
CREATININE - SERUM Method : Modified jaffe method	**1.48**	0.70 - 1.40	mg/dl
BLOOD UREA NITROGEN / CREATININE RATIO Method : Derived	9.59	9.1 - 23.1	Ratio
URIC ACID Method : Uricase/ Peroxidase	6.79	3.0 - 7.2	mg/dL
Note: Please correlate with clinical conditions.			
Electrolytes			
Sodium (NA+) Method : Method: ISE Direct	139.3	136.0 - 146.0	mEq/L
Potassium (K+) Method : Method: ISE Direct	3.74	3.50 - 5.50	mEq/L
Chloride (CL) Method : Method: ISE Direct	103.2	96.0 - 108.0	mEq/L
Method: ISE Indirect			
Interpretation Sodium measurements are used in the diagnosis and treatment of aldosteronism (excessive secretion of the hormone aldosterone), diabetes insipidus (chronic excretion of large amounts of dilute urine, accompanied by extreme thirst), adrenal hypertension, Addison's disease (caused by destruction of the adrenal glands), dehydration, inappropriate antidiuretic hormone secretion, or other diseases involving electrolyte imbalance. Potassium measurements are used to monitor electrolyte balance in the diagnosis and treatment of disease conditions characterized by low or high blood potassium levels. Chloride measurements are used in the diagnosis and treatment of electrolyte and metabolic disorders such as cystic fibrosis and diabetic acidosis			

END OF REPORT

Dr. Ankit Aggarwal
(Consultant Pathologist)

CONDITIONS OF LABORATORY TESTING & REPORTING
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LABORATORY REPORT

Patient Name		**Reference**	: Dr. JEENA SIKHO LIFECARE LTD	**Registered On**	: FEB 10, 2025, 01:21 P.M.
Age / Sex	: 36 years / Male	**Organization**	: WELLCARE PATH LAB PVT.LTD	**Collected On**	: FEB 10, 2025, 01:21 P.M.
UID No	: 23539	**Org ID**	: WELLCARE PATH LAB	**Reported On**	: FEB 10, 2025, 02:12 P.M.

45553

Test Description	Value(s)	Reference Range	
Complete Blood Count(CBC)			
Hemoglobin (HB) Method : Cynmeth Photometric Measurement	**11.6**	13.0 - 17.0	g/dL
Total Leucocytes Count (TLC) Method : Electrical Impedance	10800	4000 - 11000	/cmm
DIFFERENTIAL COUNT			
Neutrophils Method : VCSn Technology	59	40 - 75	%
Lymphocytes Method : VCSn Technology	32	20 - 45	%
Monocytes Method : VCSn Technology	05	2 - 10	%
Eosinophils Method : VCSn Technology	04	1 - 6	%
Basophils	00	0 - 1	%
Total RBC Count Method : Electrical Impedance	4.36	3.50 - 6.50	Mill/Cumm
Platelet Count Method : VCSn Technology	3.02	1.50 - 4.50	Lacs/Cumm
PCV/HCT Method : Calculated	37.9	35.0 - 47.0	%
Red cell distribution width (RDW) Method : Electrical Impedance	14.5	13.0 - 18.0	%
Mean corpuscular volume (MCV) Method : Electrical Impedance	87.0	76.0 - 96.0	fl
Mean Corpuscular Hemoglobin (MCH) Method : Calculated	**26.6**	27.0 - 32.0	pg
Mean Corpuscular Hemoglobin Concentration(MCHC) Method : Calculated	30.5	30.0 - 35.0	%
Microscopy,Fully Automated Hematology Analyser alfa swelab double chamber 3 Part			
RENAL FUNCTION TEST (RFT)			
BLOOD UREA Method : Urease/ UV	**50.36**	15.0 - 46.0	mg/dl
BLOOD UREA NITROGEN (BUN) Method : Kinetic UV Assay	23.50	7.0 - 25.0	mg/dl
CREATININE - SERUM Method : Modified jaffe method	**2.11**	0.70 - 1.40	mg/dl

CONDITIONS OF LABORATORY TESTING & REPORTING

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LABORATORY REPORT

Patient Name		**Reference**	: Dr. JEENA SIKHO LIFECARE LTD
Age / Sex	: 36 years / Male	**Organization**	: WELLCARE PATH LAB PVT.LTD
UID No	: 23539	**Org ID**	: WELLCARE PATH LAB
		Registered On	: FEB 10, 2025, 01:21 P.M.
		Collected On	: FEB 10, 2025, 01:21 P.M.
		Reported On	: FEB 10, 2025, 02:12 P.M.

45553

Test Description	Value(s)	Reference Range	
BLOOD UREA NITROGEN / CREATININE RATIO Method : Derived	11.14	9.1 - 23.1	Ratio
URIC ACID Method : Uricase/ Peroxidase	8.46	3.0 - 7.2	mg/dL

Note:
Please correlate with clinical conditions.

Electrolytes

Sodium (NA+) Method : Method: ISE Direct	136.2	136.0 - 146.0	mEq/L
Potassium (K+) Method : Method: ISE Direct	4.47	3.50 - 5.50	mEq/L
Chloride (CL) Method : Method: ISE Direct	105.2	96.0 - 108.0	mEq/L

Method:
ISE Indirect

Interpretation
Sodium measurements are used in the diagnosis and treatment of aldosteronism (excessive secretion of the hormone aldosterone), diabetes insipidus (chronic excretion of large amounts of dilute urine, accompanied by extreme thirst), adrenal hypertension, Addison's disease (caused by destruction of the adrenal glands), dehydration, inappropriate antidiuretic hormone secretion, or other diseases involving electrolyte imbalance. Potassium measurements are used to monitor electrolyte balance in the diagnosis and treatment of disease conditions characterized by low or high blood potassium levels. Chloride measurements are used in the diagnosis and treatment of electrolyte and metabolic disorders such as cystic fibrosis and diabetic acidosis

C/E Complete Urine Examination

URINE ROUTINE AND MICROSCOPIC EXAMINATION

PHYSICAL EXAMINATION:			
Colour of Urine	Pale Yellow	Straw to Yellow	/HPF
Visually Appearance	Clear	Expected Clear	/HPF
Reaction (pH)	Acidic 5.5	5.0 - 8.0	/HPF
Specific Gravity	1.010	1.000 - 1.030	/HPF
Protein	Absent	Expected Absent	/HPF
Glucose	Absent	Expected Absent	/HPF
MICROSCOPIC EXAMINATION			
Pus Cells	1 - 2	0 - 2	/HPF
Epithelial Cells	2 - 3	Expected Absent	/HPF
Red Blood Cells (RBC).	Absent	Expected Absent	/HPF
Casts	Absent	Expected Absent	/HPF

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LABORATORY REPORT

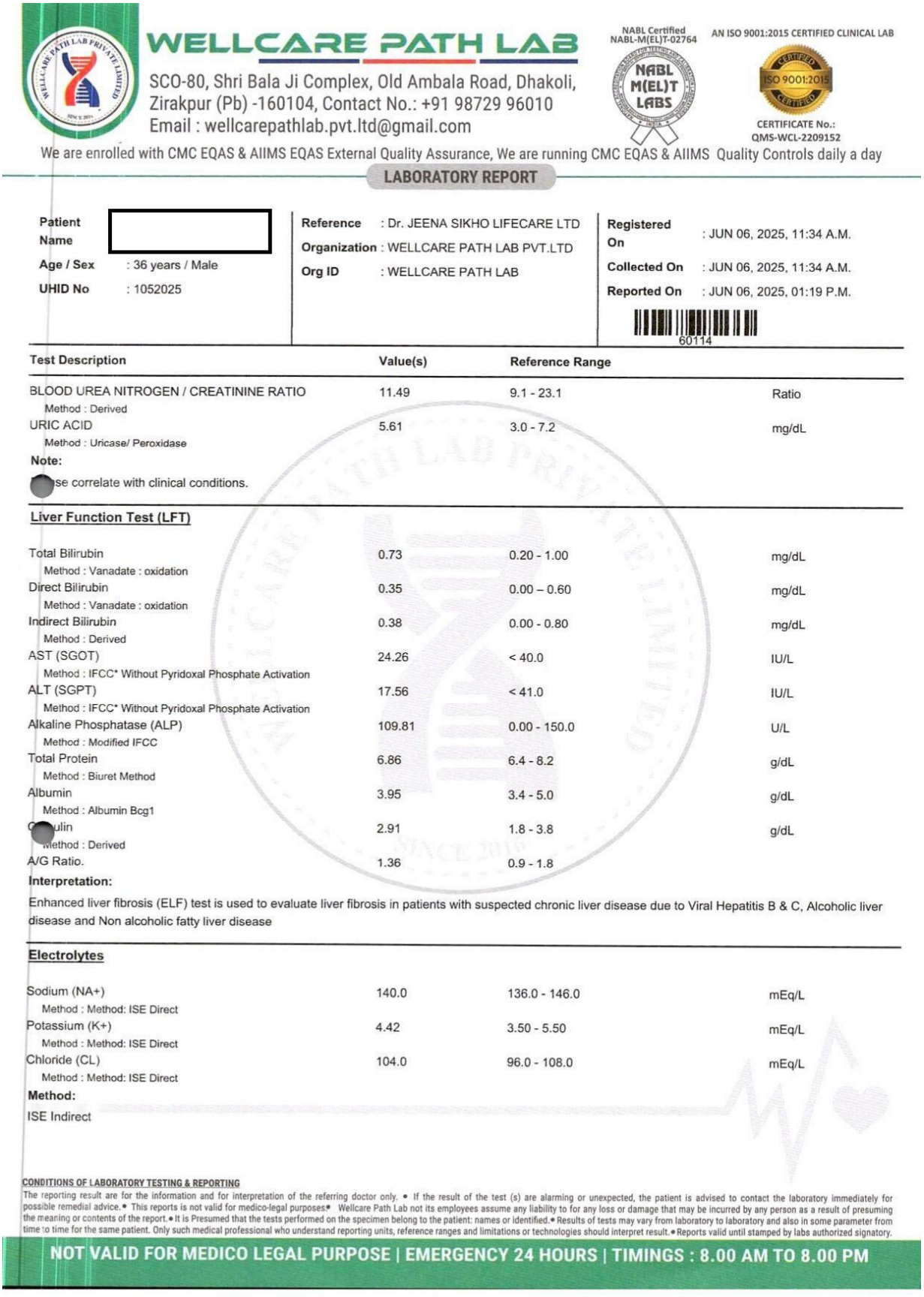
Patient Name		Reference	: Dr. JEENA SIKHO LIFECARE LTD	Registered On	: JUN 06, 2025, 11:34 A.M.
Age / Sex	: 36 years / Male	Organization	: WELLCARE PATH LAB PVT.LTD	Collected On	: JUN 06, 2025, 11:34 A.M.
UHID No	: 1052025	Org ID	: WELLCARE PATH LAB	Reported On	: JUN 06, 2025, 01:19 P.M.

60114

Test Description	Value(s)	Reference Range	
Complete Blood Count(CBC)			
Hemoglobin (HB)	**11.7**	13.0 - 17.0	g/dL
Method : Cynmeth Photometric Measurement			
Total Leucocytes Count (TLC)	8500	4000 - 11000	/cmm
Method : Electrical Impedance			
DIFFERENTIAL COUNT			
Neutrophils	68	40 - 75	%
Method : VCSn Technology			
Lymphocytes	26	20 - 45	%
Method : VCSn Technology			
Monocytes	04	2 - 10	%
Method : VCSn Technology			
Eosinophils	02	1 - 6	%
Method : VCSn Technology			
Basophils	00	0 - 1	%
Total RBC Count	3.97	3.50 - 6.50	Mill/Cumm
Method : Electrical Impedance			
Platelet Count	2.02	1.50 - 4.50	Lacs/Cumm
Method : VCSn Technology			
PCV/HCT	37.4	35.0 - 47.0	%
Method : Calculated			
Red cell distribution width (RDW)	**12.9**	13.0 - 18.0	%
Method : Electrical Impedance			
Mean corpuscular volume (MCV)	94.1	76.0 - 96.0	fl
Method : Electrical Impedance			
Mean Corpuscular Hemoglobin (MCH)	29.5	27.0 - 32.0	pg
Method : Calculated			
Mean Corpuscular Hemoglobin Concentration(MCHC)	31.4	30.0 - 35.0	%
Method : Calculated			

Microscopy,Fully Automated Hematology Analyser alfa swelab double chamber 3 Part

RENAL FUNCTION TEST (RFT)			
BLOOD UREA	34.45	15.0 - 46.0	mg/dl
Method : Urease/ UV			
BLOOD UREA NITROGEN (BUN)	16.08	7.0 - 25.0	mg/dl
Method : Kinetic UV Assay			
CREATININE - SERUM	1.40	0.70 - 1.40	mg/dl
Method : Modified jaffe method			



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LABORATORY REPORT

Patient Name		Reference	: Dr. JEENA SIKHO LIFECARE LTD	Registered On	: JUN 06, 2025, 11:34 A.M.
Age / Sex	: 36 years / Male	Organization	: WELLCARE PATH LAB PVT.LTD	Collected On	: JUN 06, 2025, 11:34 A.M.
UHID No	: 1052025	Org ID	: WELLCARE PATH LAB	Reported On	: JUN 06, 2025, 01:19 P.M.

60114

Test Description	Value(s)	Reference Range	
BLOOD UREA NITROGEN / CREATININE RATIO	11.49	9.1 - 23.1	Ratio
Method : Derived			
URIC ACID	5.61	3.0 - 7.2	mg/dL
Method : Uricase/ Peroxidase			

Note:

[redacted]se correlate with clinical conditions.

Liver Function Test (LFT)

Total Bilirubin	0.73	0.20 - 1.00	mg/dL
Method : Vanadate : oxidation			
Direct Bilirubin	0.35	0.00 – 0.60	mg/dL
Method : Vanadate : oxidation			
Indirect Bilirubin	0.38	0.00 - 0.80	mg/dL
Method : Derived			
AST (SGOT)	24.26	< 40.0	IU/L
Method : IFCC* Without Pyridoxal Phosphate Activation			
ALT (SGPT)	17.56	< 41.0	IU/L
Method : IFCC* Without Pyridoxal Phosphate Activation			
Alkaline Phosphatase (ALP)	109.81	0.00 - 150.0	U/L
Method : Modified IFCC			
Total Protein	6.86	6.4 - 8.2	g/dL
Method : Biuret Method			
Albumin	3.95	3.4 - 5.0	g/dL
Method : Albumin Bcg1			
[redacted]ulin	2.91	1.8 - 3.8	g/dL
Method : Derived			
A/G Ratio.	1.36	0.9 - 1.8	

Interpretation:

Enhanced liver fibrosis (ELF) test is used to evaluate liver fibrosis in patients with suspected chronic liver disease due to Viral Hepatitis B & C, Alcoholic liver disease and Non alcoholic fatty liver disease

Electrolytes

Sodium (NA+)	140.0	136.0 - 146.0	mEq/L
Method : Method: ISE Direct			
Potassium (K+)	4.42	3.50 - 5.50	mEq/L
Method : Method: ISE Direct			
Chloride (CL)	104.0	96.0 - 108.0	mEq/L
Method : Method: ISE Direct			

Method:

ISE Indirect

CONDITIONS OF LABORATORY TESTING & REPORTING

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Fig 7 The DTPA scan

AERB Reg. No. 21-NMLICENSE-639460

INDIAN INSTITUTE OF NUCLEAR MEDICINE & SCANNING

(A Unit of Pan Rock Management India Pvt. Ltd.)

Shivalik Hospital, Sector 69, Mohali. Ph. 0172-5277528, 7009304465

Dr. SIDDHANT PANDEY
Consultant & Head

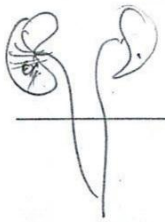
Dr. ROOPAM PANDEY, MD
Director, IINMAS

NAME [redacted] AGE: 36 Y SEX: M DATE: 13/01/2025
REG. NO. : REN-45-25
ATTENDING HOSPITAL: HIIMS, DERABASSI
CLINICAL STATUS: To know functional status, Drainage pattern AND differential function with GFR

DYNAMIC RENAL SCINTIGRAPHY

ISOTOPE: 99mTc-DTPA **DOSE: 5 mCi**

	LEFT KIDNEY	RIGHT KIDNEY
PERFUSION PHASE		
VISUALISATION	prompt	prompt
RELATIVE PERFUSION	normal	normal
UPTAKE PHASE		
SIZE	normal	normal
SHAPE	normal	normal
POSITION	normal	normal
CONCENTRATION	normal	normal
CORTICALMARGIN DELINEATION	well-defined	well-defined
SPLIT FUNCTION	53 %	47 %
EXCRETORY PHASE		
COLLECTING SYSTEM	normal	normal
DRAINAGE PATTERN	normal	normal
DIURETIC RESPONSE	normal	normal
URETER	normal	normal
GFR	34.8 ml/min	31.0 ml/min



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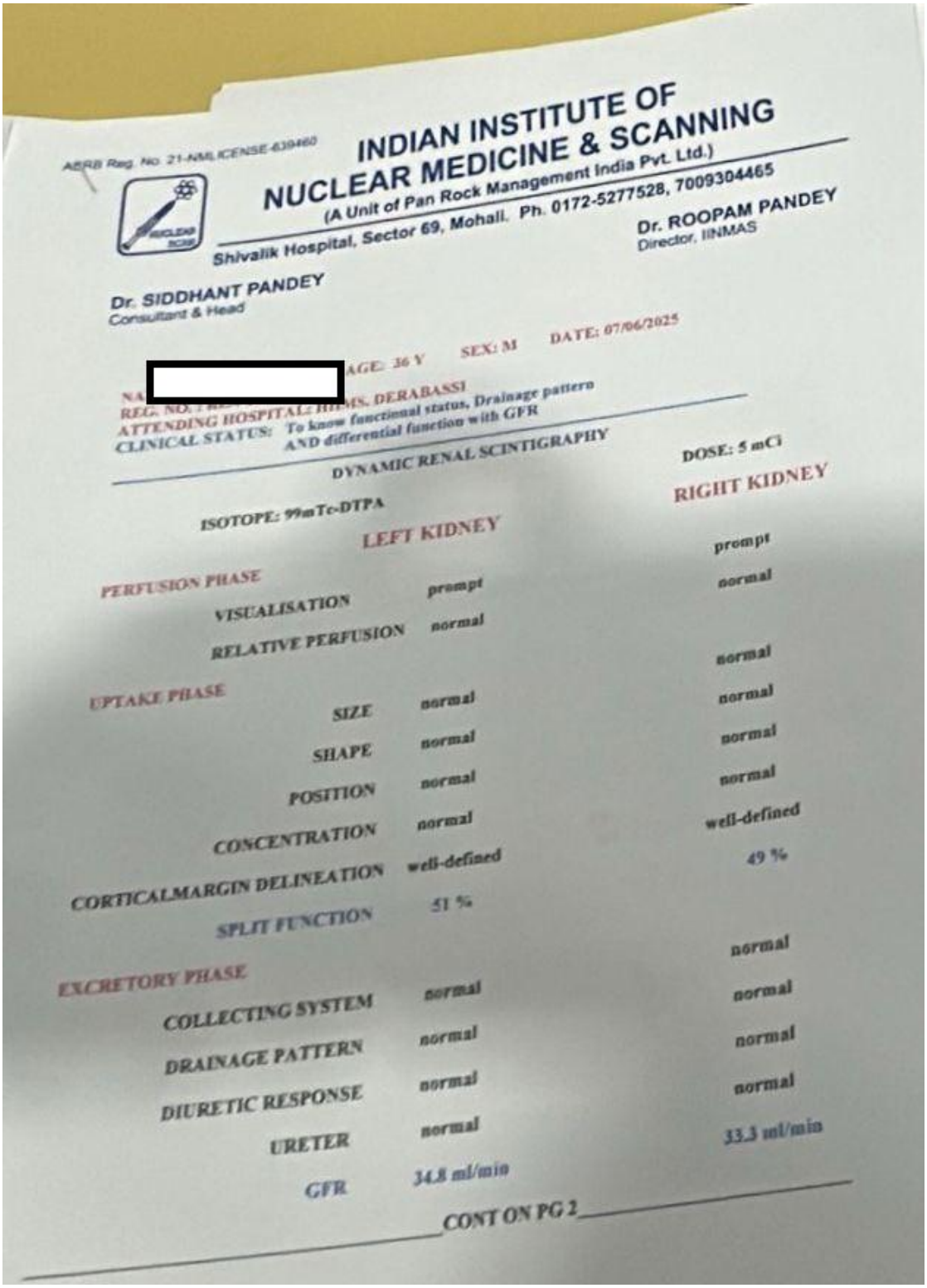

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Dr. SIDDHANT PANDEY
Consultant & Head
Dr. ROOPAM PANDEY
Director, IINMAS

AERB Reg. No. 21-NML/LICENSE-639460

AGE: 36 Y SEX: M DATE: 07/06/2025
ATTENDING HOSPITAL: DERABASSI
CLINICAL STATUS: To know functional status, Drainage pattern AND differential function with GFR

DYNAMIC RENAL SCINTIGRAPHY

ISOTOPE: 99mTc-DTPA DOSE: 5 mCi

	LEFT KIDNEY	RIGHT KIDNEY
PERFUSION PHASE		
VISUALISATION	prompt	prompt
RELATIVE PERFUSION	normal	normal
UPTAKE PHASE		
SIZE	normal	normal
SHAPE	normal	normal
POSITION	normal	normal
CONCENTRATION	normal	well-defined
CORTICALMARGIN DELINEATION	well-defined	49 %
SPLIT FUNCTION	51 %	
EXCRETORY PHASE		
COLLECTING SYSTEM	normal	normal
DRAINAGE PATTERN	normal	normal
DIURETIC RESPONSE	normal	normal
URETER	normal	normal
GFR	34.8 ml/min	33.3 ml/min

CONT ON PG 2

5. The effects of *Ahar-Vihar*

The *Ayurvedic* and DIP dietary guidelines offers a practical framework for interrupting this chain of events. A millet-based diet comprising five types, Foxtail, Kodo, Little, Browntop, and Barnyard millets, serves as a key dietary intervention.[39] These millets are *Laghu* (light to digest), *Tridoshahar* (balancing to all three *Doshas*), and naturally low in sodium and phosphorus, thus reducing the metabolic load on the kidneys. The regular consumption of steamed salads, seasonal fruits, fermented millet shakes, and sprouts promotes *Deepan* and *Pachan* (enhancement of digestion and metabolism), thereby strengthening the digestive fire (*Agni*) and reducing the formation of *Ama*.[40] Excluding aggravating foods such as wheat, refined food, milk and dairy products, coffee, tea, and processed or packed items prevents further *Kapha* and *Meda Dushti*, which are known to obstruct *Srotas* and increase toxicity.[41]

Including herbal teas made from curry leaves, raw ginger, and turmeric offers *Shoth har* (anti-inflammatory), *Mutral* (diuretic), and *Rasayana* (rejuvenative) benefits, which are critical for vascular and renal health.[42] Hydration through 1 liter of alkaline water consumed 3–4 times a day, as well as turmeric-infused water, boiled water reduced to half its volume, and living water, helps balance the body's pH, reduce systemic inflammation, and flush out toxins, thereby supporting kidney function.[43]

The lifestyle component (*Vihar*) of this regimen emphasizes the importance of daily *yoga*, particularly *Sukhasan* and *Sukshm Pranayaam*, which pacify *Vata*, especially *Vyana Vayu*, and enhance the parasympathetic response, contributing to better blood pressure control.[44] Mindful practices such as expressing gratitude before meals improve *Manasik Bhava* (mental state), while chewing food 32 times ensures proper digestion and assimilation.[45] The recommendation to eat before 8 PM aligns with the body's circadian rhythm and promotes optimal digestion.[46] Performing *Vajrasan* after meals and taking a 10-minute slow walk further supports digestion and prevents postprandial blood sugar spikes.[47] One day of fasting per week serves as *Langhan* therapy, allowing the digestive system to rest, enhancing *Agni*, reducing *Ama*, and clearing *Srotorodh* through internal detoxification.[48]

From a physicochemical standpoint, this approach also addresses key factors associated with CKD and hypertension. It helps lower oxidative stress, corrects chronic low-grade metabolic acidosis, improves endothelial function, and downregulates pro-inflammatory cytokines.[49] Millets provide a low-glycemic, high-fiber profile that regulates insulin levels and supports cardiovascular health.[50] Alkaline hydration and herbal infusions support electrolyte balance and kidney filtration.[51] Cooking millets in steel cookware with mustard oil adds further anti-inflammatory and circulatory benefits.

FUTURE RESEARCH PERSPECTIVES

This study was conducted on a 36-year-old male patient with CKD and hypertension. While the findings were encouraging, the conclusions are limited due to the single-patient design. To strengthen the evidence base, future research must include larger sample sizes through well-structured, randomized controlled trials. These studies should aim to evaluate the long-term efficacy, safety, and reproducibility of the *Ayurvedic* therapies and lifestyle modifications used. Establishing standardized clinical protocols through such research will be essential for incorporating these interventions into broader clinical practice and enhancing patient outcomes in CKD with hypertension.

CONCLUSION

The following conclusions can be drawn from this case study on treating CKD with hypertension using *Ayurvedic* treatments with previously prescribed allopathic medications:

Symptoms: At the first visit, the patient presented with symptoms such as weakness and swelling in B/L legs. After the treatments followed by *Ayurvedic* care, the patient showed significant improvement. The conditions and symptoms were reduced, and no new symptoms were reported, indicating notable improvement in kidney function and overall well-being.

Vitals: The patient's vital parameters revealed a marked transition from hypertensive to more stable readings over time. On 18 April, 2025, the highest blood pressure recorded was 180/110 mmHg, indicating severe hypertension. By 06 June, 2025, the blood pressure had normalized to 120/90 mmHg, suggesting improved cardiovascular control. These findings reflect positive outcomes in managing hypertension and autonomic balance during the course of treatment.

Investigations: The case study demonstrated notable improvements in renal function and key biochemical parameters in a 36-year-old male patient with chronic kidney disease (CKD) and hypertension following *Ayurvedic* interventions. The GFR of the right kidney improved from 31.0 ml/min on 13-01-2025 to 33.3 ml/min on 07-06-2025, while the left kidney GFR remained stable at 34.8 ml/min. Consequently, the global GFR increased from 65.8 ml/min to 68.1 ml/min, indicating enhanced overall kidney function. Biochemical parameters also reflected clinical improvement. Serum creatinine reduced significantly from 2.11 mg/dL to 1.40 mg/dL. Urea levels peaked at 59.93 mg/dL but declined steadily to 34.45 mg/dL, and blood urea nitrogen (BUN) dropped from 27.97 mg/dL to 16.08 mg/dL. Additionally, hemoglobin improved from 10.7 gm/dL to 11.7 gm/dL, and uric acid stabilized within manageable limits. These findings collectively suggest a positive trend in renal function and systemic biochemical balance with *Ayurvedic* management.

The study concludes that combining *Ayurvedic* therapies for CKD led to beneficial outcomes, such as reduced symptoms, improved vital parameters, and enhanced lab results.

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