International Research Journal of Ayurveda & Yoga Vol. 9(2), pp. 26-34, February, 2026
Available online at http://irjay.in
ISSN: 2581-785X
DOI: 10.47223/IRJAY.2026.90205

CASE REPORT

Integrated Ayurvedic Management and Yoga Intervention in Non-alcoholic Fatty Liver Disease with Obesity: A Case Report

Shivani Samarth Kodape[1]*, Jai Singh Yadav[2]

[1]PG Scholar, P.G. Department of Swasthavritta and Yoga, Ch. Brahm Prakash Ayurved Charak Sansthan GNCTD, New Delhi, India.
[2]Associate Professor, P.G. Department of Swasthavritta and Yoga, Ch. Brahm Prakash Ayurved Charak Sansthan GNCTD, New Delhi, India.

ARTICLE INFO

Article history:
Received on: 07-01-2026
Accepted on: 14-02-2026
Published on: 28-02-2026

Key words:
Arogyavardhini Vati,
Non-alcoholic Fatty Liver,
Phalatrikadi Kwatha,
Yakrit Vikara,
Yoga

ABSTRACT

The buildup of excess fat within the liver cells in the absence of excessive alcohol consumption is known as non-alcoholic fatty liver disease (NAFLD). According to the WHO, the prevalence of chronic liver disease, such as NAFLD, has steadily increased in recent years. Ayurveda also provides a good description of liver disease. *Pittasthana, Raktavahasrotomoola, Kaphamedo Dushti* and *Sthanasamsrava in Yakrut* (liver) can all cause NAFLD, which is a *Santarpanotha Vikara* (illness). A 29-year-old patient presented to the out-patient department of Department of Swasthavritta, Ch. Brahm Prakash Ayurved Charak Sansthan, New Delhi with complaints of alteration in bowel habit, pain in epigastric region, gaseous abdomen from past 7–8 months. This case was diagnosed as Non-alcoholic Adipose Liver complaint on the base of ultrasonography report. The case was treated with Ayurvedic oral medicines, such as *Arogyavardhini vati* and *Phalatrikadi kwatha* by adding frequent *yoga* practices and got satisfactory results.

1. INTRODUCTION

Non-alcoholic fatty liver disease (NAFLD) is a Group of disease that are all associated with hepatic steatosis, or fatty liver, in people who either never drink alcohol or only drink very little (<20 g of ethanol/week). According to the diagnosis of NAFLD.[1] It can be divided into three categories: Cirrhosis in the absence of excessive alcohol consumption, inflammation (non-alcoholic steatohepatitis, or NASH), and simple fatty infiltration (steatosis 5–10% of the total weight of the liver). While NASH is associated with cirrhosis, liver cancer, and progressive fibrosis, simple steatosis does not result in morbidity. NAFLD may be regarded as the hepatic manifestation of the "metabolic syndrome" because it is closely linked to obesity, dyslipidemia, insulin resistance, and type 2 diabetes mellitus.[2] Between 1990 and 2017, the number of NAFLD cases worldwide rose from 19.34 million to 29.49 million. East Asia bears the greatest burden, with South Asia, North Africa, and the Middle East following.[3]

Liver disease, which is brought on by poor lipid metabolism as a result of inactivity and poor eating habits, is not specifically addressed in Ayurvedic texts. In Ayurveda, liver disorders and their treatment are covered under *Udara Roga* or abdominal disorders and are covered in extensive and dispersed detail throughout the old texts. There are eight types of *Udara Roga*, according to various Ayurvedic texts. The symptoms of *Yakrit Vridhi* as *Yakrutodara.*[4]

Corresponding Author:
Shivani Samarth Kodape, PG Scholar,
P.G. Department of Swasthavritta and Yoga, Ch. Brahm Prakash Ayurved Charak Sansthan GNCTD, New Delhi, India.
Email: shivanikodape22@gmail.com

2. CASE PRESENTATION

A 29-year-old male patient visited the out-patient department (OPD) of the Department of Swasthavritta, Ch. Brahm Prakash Ayurved Charak Sansthan, New Delhi, on 4 March 2025 (OPD Regn. no. 9742) with the complaint of irregular bowel habit, gaseous abdomen, and pain in the right hypochondriac region. The patient had this pain from 7 to 8 months. Initially, the patient had bloating and alteration in bowel habits, which affected his daily activities. With these complaints, he went for an ultrasonography (USG) in which an impression of Grade II fatty liver was detected. Hence, the patient consulted at the institute OPD for Ayurvedic care for his ailment.

2.1. Clinical Findings

The patient had a *Madhyam koshti*, *Mandagni,* and *Madhyam bala Vata-kapha Prakruti*. Both the heart rate and blood pressure were within acceptable bounds. The patient had a body mass index of 30.1

and was obese, weighing 90 kg. During a gastrointestinal examination, it was discovered that he was experiencing discomfort when the right hypochondrium was palpated. The patient had no significant past medical history as well as surgical and accidental history. None of the family members had any disease related with his disease. The patient was well oriented to time, date, and place. The ashtavidha pariksha and systemic examination is done and detail given in tables 2 and 3 below

2.2. Local Examination

- Gastrointestinal tract (GIT) examination:
  - Palpation – Liver and spleen non-palpable, tenderness ++
  - Percussion – Tympanic note heard
  - Auscultation – Normal bowel sound.
- Central nervous system examination: No abnormalities detected (NAD)
- Cardiovascular system examination: NAD
- Respiratory examination: NAD
- Locomotor examination: NAD

2.3. *Dashvidha Pariksha*

- *Prakriti – Vata-kaphaja*
- *Vikriti – Pitta-kaphaja*
- *Pramana – Vishama*
- *Sara – Madhyam*
- *Samhana – Madhyam*
- *Satmya – Madhyam*
- *Satva – Madhyam*
- *Vaya – Madhyam*
- *Vyayam – Avara*

2.4. Samprapti (Pathogenesis)

- *Dosha: Kapha (predominantly) and Pitta vitiation*
- *Dushya: Medo Dhatu, Rasa, Rakta, and Yakrit*
- *Srotas: Medovaha, Raktavaha, Annavaha, and Rasavaha Srotas*
- *Udbhava Sthana: Amashaya GIT*
- *Vyaktisthana: Yakrit (liver) and Medo dhatu*

2.5.Sequence of Events

A sedentary lifestyle and unhealthful diet lead to Agnimandya, which in turn causes the formation of Ama. Yakrit dushti is brought on by accumulated Ama, which also causes Meda vriddhi and Srotorodha of Medovaha and Raktavaha Srotas. This leads to fat accumulation in the liver, which in turn causes NAFLD (fig 1).

2.6. Timeline

The patient had taken treatment for 7 months with proper yoga intervention. The timeline of the treatment is mention in (table 1) given below.

2.7. Diagnostic Assessment

The diagnosis was done based on symptoms and USG findings. In Ayurveda, this condition resembles *Yakritodara*. In USG findings, the liver measured 17 cm in size, normal in outline, bright and altered echotexture (Fig 2). In the overall impression, USG showed fatty liver Grade II infiltration changes with gut gases present in the pancreas. Endoscopy shows diffuse pangastritis; there were no signs of fluid accumulation, abnormal pattern of blood flow, sustained increase in temperature, or formation of cyst. Hence, these things were excluded from the differential diagnosis.

2.8. Therapeutic Intervention

For 7 months, the patient received *Ayurvedic* medication and intermittent *yoga* intervention. Every intervention has already been discussed above. The treatment and follow-up were conducted in accordance with the yogic intervention guidelines listed below.

2.9. Follow-up and Outcomes

The follow-up was conducted every 2 months to monitor the symptoms associated with *Medo Roga* and *Yakritodar Roga*. There are four grades for the symptoms: None, mild, moderate, and severe. Table 4 below shows the observed changes in subjective criteria. Table 5 shows the Detail yoga intervention protocol.

3. DISCUSSION

The patient's *prakriti* was *vata-kapha*. He is employed in the corporate office as a field supervisor. He was unable to eat his meals on time and had changed his eating habits as a result. He developed NAFLD as a result of alterations in his liver metabolism. The patient lacked the time to engage in physical activity and exercise. As a result, his grievances grew more frequent every day. NAFLD and *yakrit vikar* are related in *Ayurveda*. In this medical system, the liver is referred to as *yakrit*. The *jathragni* and *dhatwagni,* which are the most crucial components for food digestion and are in charge of all bodily metabolic processes, are located in the *Yakrit*. When choosing medications to treat such illnesses, one should exercise extreme caution. The patient is healed not only by the medications but also by patience, confidence, and trust. Despite adhering to a rigorous diet, losing weight, exercising, and taking allopathic medications, the patient was not experiencing any appreciable improvement. He was evaluated on Ayurvedic parameters when he arrived at Chaudhary Brahm Prakash Ayurved Charak Sansthan, OPD-20. After *dosha, dushya, samprapti*, and other factors were taken into account, *Ayurvedic* medicines and *yogic* intervention were recommended. The medicines chosen here are *agrogyavardhini vati and phalatrikadi kwatha*.

3.1. *Arogyavardhini Vati*

The Indian Ayurvedic formulary mentions a polyherbo-mineral formulation called *Arogyavardhini vati.* It has been used for centuries to treat liver problems, jaundice, and a variety of skin conditions, with claims of safety and effectiveness. *Picrorrhiza kurroa (Kutki), Terminalia chebula (Haritaki), Terminalia bellerica (Bibhitaka), Emblica officinalis (Amalaki), Asphaltum (Shilajatu), Commiphora wightii (Guggulu), Ricinus communis (Eranda), Azadirachta indica (neem leaves), Iron (Lauha-bhasma), Mica (Abhraka bhasma), and copper (Tamra bhasma).*[5] *Kutuki (Picrorhizakurroa Royle ex Benth)* is the main component of *Arogyavardhini Vati*. *Kutuki*, a *Titka rasa Pradhana*, can help reduce *Ama* by performing *Pachana karma*. Like *Pachana* of *Drava* and *Kleda*, *Arogyavardhini Vati* is added to *Medo-Pachaka*.[6] It aids in the secretion of bile, which further facilitates digestion and enhances liver function. The medication is very helpful for jaundice, cirrhosis of the liver, and poor liver function. Bitter-tasting medications balance fat metabolism, lower fat mass, and rekindle the tissue fire. It is an effective treatment for getting rid of extra fat, removing different kinds of toxins from the body, and lowering the body's accumulated cholesterol.[7]

3.2. *Phalatrikadi Kwatha*

Eight medications, including *Pitta-Kapha Shamaka*, *Yakriduttejaka*, *Shothahara*, *Pandurogahara, Recana, Dipana,* and others, have primarily *Kamalahara* qualities. *Kamala* and Pandu are relieved by *Kvatha* of *Triphala* (*Amalaki, Haritaki*, and *Bibhitaki*), *Amrita*, *Vasa*, *Tikta* (*Katuka*), *Bhunimba*, and *Nimba tvaka* taken with honey.[8] *Phaltrikadi kwatha* facilitates better stomach emptying, which aids in digestion once more. Its ability to promote hepatocellular regeneration, cholagogue and choleretic activity, membrane stabilization, antioxidant effect, and enhance enzyme and metabolic corrections makes it a proven hepatoprotective medication. Eight medications found in *Phalatrikadi Kwatha* are primarily helpful in treating cirrhosis, alcoholic hepatitis, and *koshthashrit kamala*/hepatocellular jaundice.[9,10]

3.3. *Yogic* Intervention

Kapalbhati pranayama, as well as *yogasanas,* such as *trikonasana, Paschimottanasana, Gomukhasana, Pawanmuktasana, Ardhamatsyendrasana,* and *dhyana,* were all taught. It is best to practice *kapal bhati pranayama* without eating. A standard protocol was used to practice one standing and four sitting asanas, including *trikonasana, Paschimottanasana, Gomukhasana, Pawanmuktasana, Ardhamatsyendrasana,* and *dhyana.* These *asanas* raised pancreatic beta cells' sensitivity to glucose, indicating long-term glycemic control and insulin dynamics improvements.[11] Finally, the patient was instructed to sit comfortably with their hands resting on their knees, their legs crossed, and their back straight. The *kapalabhati pranayama* contracts the abdomen while exhaling and inhaling forcefully. Exhalation and inhalation were combined to complete one stroke. The patient was instructed to maintain a steady posture with no head, shoulder, or leg movements. You have ten minutes to complete this *kapalabhati*.

4. CONCLUSION

Both NAFLD and metabolic disorders are complex conditions that stem from disturbed metabolism, sedentary lifestyles, and dietary excesses. Ayurveda provides a safe, all-encompassing approach that corrects the underlying imbalances of *Agni* (digestive fire), *Dosha*, *Dhatu,* and *Srotas* in addition to treating the symptoms. *Ayurveda* offers sustainable solutions for the prevention and management of these disorders. The present intervention demonstrates that an integrated Ayurvedic and yogic approach is effective in the management of NAFLD associated with obesity. Administration of *Phalatrikadi Kwatha* and *Arogyavardhini Vati*, along with structured *yogic* practices, showed significant improvement in both hepatic and metabolic parameters.

The combined use of *Phalatrikadi Kwatha, Arogyavardhini Vati,* and *yoga* resulted in improvement in clinical symptoms, reduction in body weight and body mass index, normalization of liver enzymes, and regression of hepatic steatosis. This holistic, non-invasive approach appears to be safe, effective, and sustainable, emphasizing the importance of integrative management in lifestyle-related disorders, such as NAFLD. Further large-scale and long-term studies are recommended to validate these findings and establish standardized treatment protocols.

5. DECLARATION OF PATIENT CONSENT

Authors certify that they have obtained a patient consent form, where the patient has given his consent for reporting the case and other clinical information.

6. ACKNOWLEDGMENTS

None.

7. AUTHOR'S CONTRIBUTIONS

All the authors have read and approved the final version of the manuscript.

8. FUNDING

The authors declare that no financial support was received from any organization for the submitted work. In addition, all authors declare that they have no financial relationships with organizations that might be interested in the submitted work.

9. ETHICAL STATEMENT

Ethical approval was not required for this study as it was a case report.

10. CONFLICT OF INTERESTS

The authors declare no conflicts of interest regarding the publication of this paper.

11. DATA AVAILABILITY STATEMENT

The data analyzed in this review were obtained from publicly available sources, including peer-reviewed articles, observational studies, and surveys accessible via databases.

12. PUBLISHERS NOTE

This journal remains neutral with regard to jurisdictional claims in published institutional affiliations

REFERENCES

1. Acharya YT. Sushruta samhita. Vranaprasna. Sutrasthanam 21/10. 3rd ed. Varanasi: Chowkamba Krishnadas Academy Publications; 2014. p. 101.
2. Ralston SH, Penman ID, Strachan MW, Hobson R, editors. Liver and biliary disorders. In: Davidson's principles and practice of medicine. 22nd ed., Ch. 13. London: Elsevier Health Sciences; 2018. p. 502.
3. Zhang X, Wu M, Liu Z, Yuan H, Wu X, Shi T, Chen X, Zhang T. Increasing prevalence of NAFLD/NASH among children, adolescents and young adults from 1990 to 2017: A population-based observational study. BMJ Open. 2021;11(5):e042843. doi: 10.1136/bmjopen-2020-042843
4. Panda AK, Kar A, Gupta N, Yadav R, Mishra GS, Rout S. A consensus driven statement for Ayurvedic nomenclature of various liver diseases (Yakrit Roga). Int J Ayu Trad Med. 2021;3(5):16-21.
5. Kumar G, Srivastava A, Sharma SK, Gupta YK. Safety evaluation of an Ayurvedic medicine, Arogyavardhini vati on brain, liver and kidney in rats. J Ethnopharmacol. 2012;140:151-60.
6. Khandekar S, Pansare T, Pachpor A, Maurya SK. Role of katuka (*Picrorhiza kurroa* Royle ex Benth.) in obesity W.S.R to Ayurvedic and modern aspect: A review. Int J Herb Med. 2019;7:31-5.
7. Kumar S. The role of Ayurvedic management in non-alcoholic fatty liver disease (NAFLD): A case study. Int J Complement Alt Med. 2024;17(2):103-5. doi: 10.15406/ijcam.2024.17.00689
8. Kumar N, Singh AK. Phalatrikadi kvatha-an ayurvedic hepatoprotective drug. Int J Res Pharm Chem. 2013;3(3):591-4.
9. Shastri VS. Yogratnakar. Hindi commentry -vidyotini, pandu roga. 8th ed., 5th Sloka. Varanasi: Chaukhambha Sanskrit Sansthan; 2004. p. 3.

10. Srivastava S. Sharangdhar samhita, -jeevan prada. Madhyam khand. Ch. 2/77. Varanasi: Chaukhambha Orintalia; 2015. p. 147.
11. Manjunatha S, Vempati RP, Ghosh D, Bijlani RL. An investigation into the acute and long-term effects of selected yogic postures on fasting and postprandial glycemia and insulinemia in healthy young subjects. Indian J Physiol Pharmacol. 2005;49(3):319-24.

How to cite this article:
Kodape SS, Yadav JS. Integrated Ayurvedic Management and Yoga Intervention in Non-alcoholic Fatty Liver Disease with Obesity: A Case Report. IRJAY. [online] 2026;9(2);26-34.
Available from: http://irjay.in
DOI link- https://doi.org/10.47223/IRJAY.2026.90205

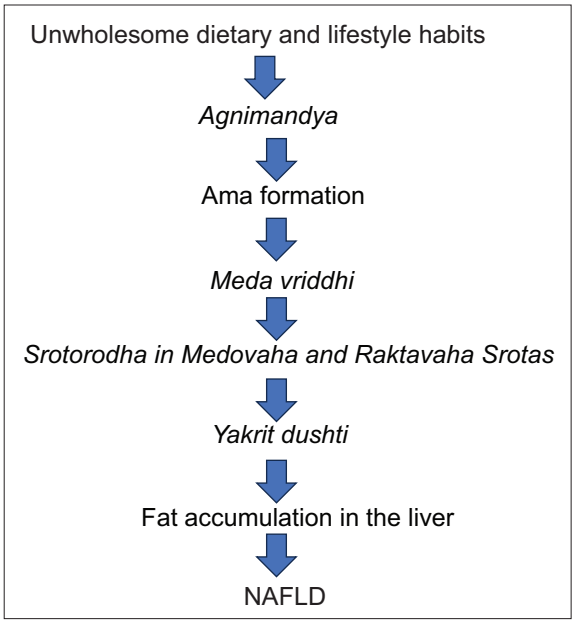
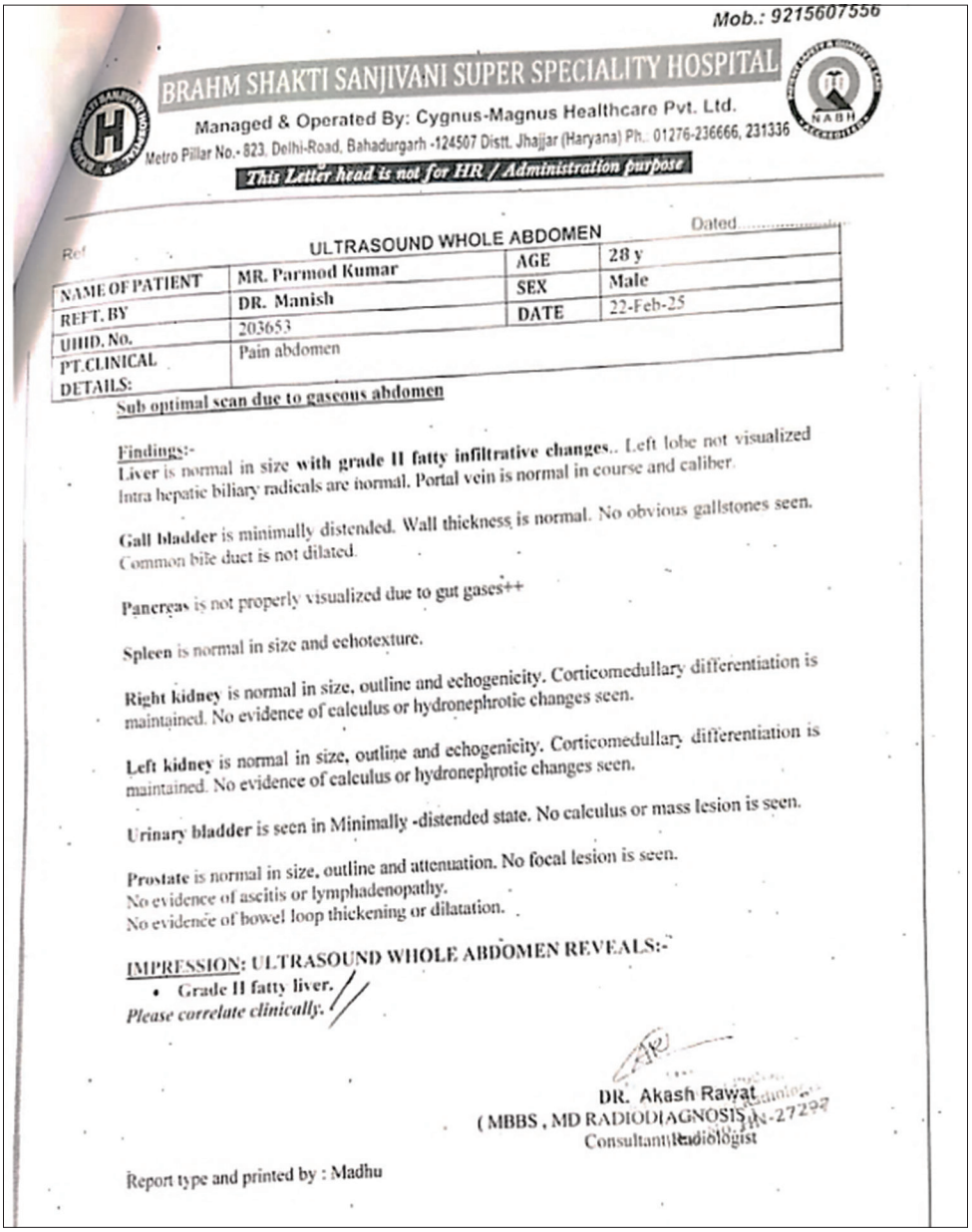


Figure 1: Sequence of Events

Table 1: Therapeutic intervention and timel ine

Date	Clinical events/investigation	Intervention
February 2025	• First episode of recurrent pain in the right hypochondriac region. • Irregular bowel habits. • Gaseous abdomen.	Painkiller and antibiotics.
March 2025	Further increase in pain with gaseous in the abdomen. Complaint of belching. Nausea. Accompanied with Obesity. USG whole abdomen: Figure 2 • Mild hepatomegaly with grade-II fatty infiltrative changes • Pancreas with gut gases^{++}(February 22, 2025) • Endoscopy – Diffuse pangastritis. (February 02, 2025) • Weight – 90 kg	1. *Phalatrikadi kwatha* – 40 mL BD. 2. *Arogyavardhini vati* – 2 TAB BD *Yoga* intervention • *Trikonasana* • *Paschimottanasana* • *Gomukhasana* • *Pawanmuktasana* • *Ardhamatsyendrasana* • *Kapalbhati pranayama* • *Dhyana*
April 2025–May 2025	Follow-up-1 • Reduction in abdominal pain. • Gaseous abdomen. • Mild nausea. • Reduction in body weight – 86 kg • USG whole abdomen was advised. Figure 3	Continue the same treatment.
June 2025–July 2025	Follow-up-2 • Improvement in the above complaints. • Gaseous abdomen + • Reduction in body weight – 84 kg USG whole abdomen: • Gaseous abdomen. • Grade-I fatty infiltration of the liver. • (June 03, 2025)	*1. Phalatrikadi kwatha* - 40 ml BD. *2. Arogyavardhini vati* – 2 TAB BD Yoga intervention • *Trikonasana* • *Paschimottanasana* • *Gomukhasana* • *Pawanmuktasana* • *Ardhamatsyendrasana* • *Kapalbhati pranayama* • *Dhyana*
August 2025–September 2025	Follow-up-3 • Improvement in the above complaints. • Reduction in body weight – 82 kg USG whole abdomen: • No significant abnormality seen. • Liver measures 11.9 cm with a normal echo pattern. • (August 19, 2025) Figure 4	1. *Arogyavardhini vati* 2. TAB BD *Yoga* intervention • *Trikonasana* • *Paschimottanasana* • *Gomukhasana* • *Pawanmuktasana* • *Ardhamatsyendrasana* • *Kapalbhati pranayama* • *Dhyana*

USG: Ultrasonography



Mob.: 9215607556

BRAHM SHAKTI SANJIVANI SUPER SPECIALITY HOSPITAL

Managed & Operated By: Cygnus-Magnus Healthcare Pvt. Ltd.

Metro Pillar No.- 823, Delhi-Road, Bahadurgarh -124507 Distt. Jhajjar (Haryana) Ph.. 01276-236666, 231336

This Letter head is not for HR / Administration purpose

Ref Dated

ULTRASOUND WHOLE ABDOMEN

NAME OF PATIENT	MR. Parmod Kumar	AGE	28 y
REFT. BY	DR. Manish	SEX	Male
UHID. No.	203653	DATE	22-Feb-25
PT.CLINICAL DETAILS:	Pain abdomen		

Sub optimal scan due to gaseous abdomen

Findings:-

Liver is normal in size **with grade II fatty infiltrative changes**.. Left lobe not visualized Intra hepatic biliary radicals are normal. Portal vein is normal in course and caliber.

Gall bladder is minimally distended. Wall thickness is normal. No obvious gallstones seen. Common bile duct is not dilated.

Pancreas is not properly visualized due to gut gases++

Spleen is normal in size and echotexture.

Right kidney is normal in size, outline and echogenicity. Corticomedullary differentiation is maintained. No evidence of calculus or hydronephrotic changes seen.

Left kidney is normal in size, outline and echogenicity. Corticomedullary differentiation is maintained. No evidence of calculus or hydronephrotic changes seen.

Urinary bladder is seen in Minimally -distended state. No calculus or mass lesion is seen.

Prostate is normal in size, outline and attenuation. No focal lesion is seen.
No evidence of ascitis or lymphadenopathy.
No evidence of bowel loop thickening or dilatation.

IMPRESSION: ULTRASOUND WHOLE ABDOMEN REVEALS:-

- **Grade II fatty liver.**

Please correlate clinically.

DR. Akash Rawat
(MBBS , MD RADIODIAGNOSIS)
Consultant Radiologist

Report type and printed by : Madhu

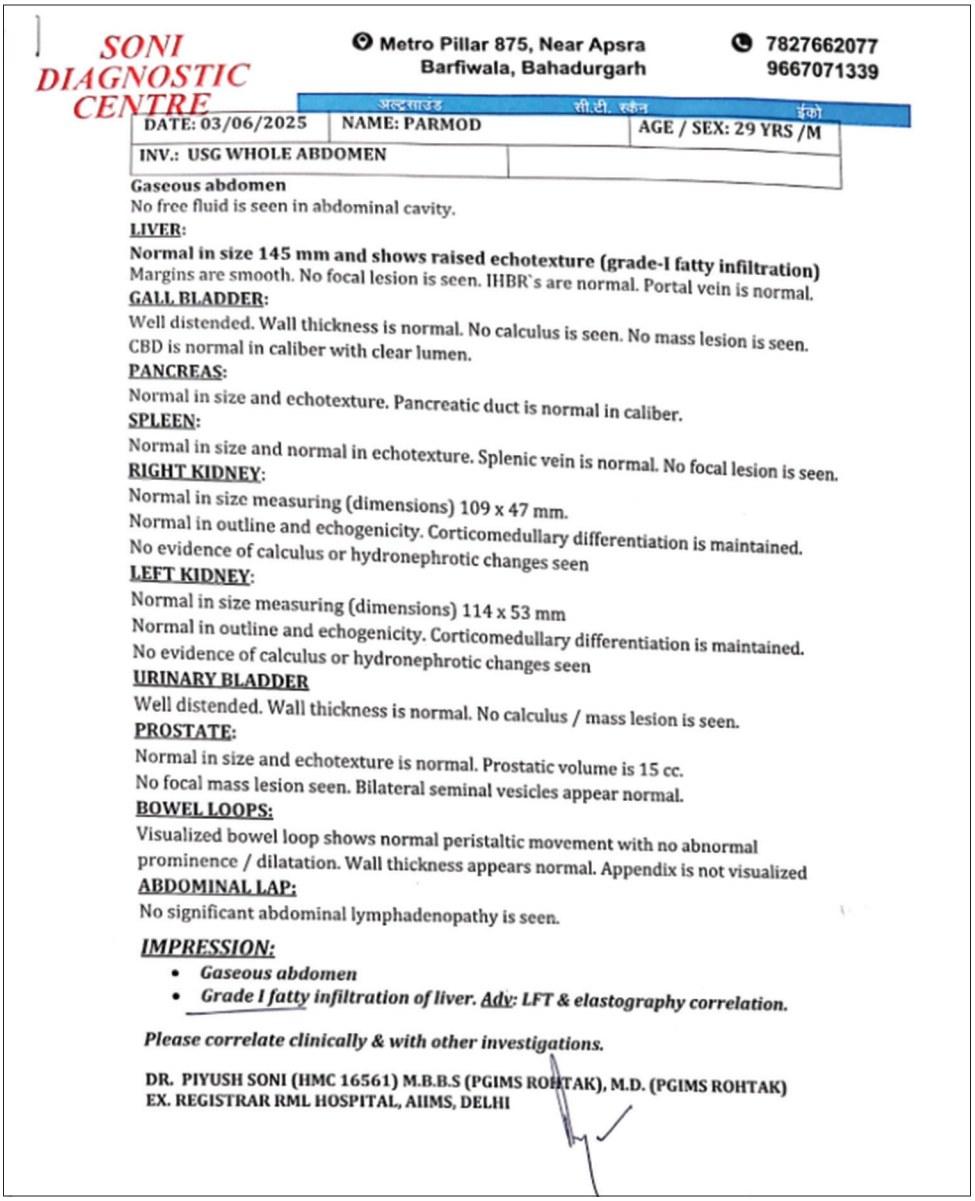
Figure 2: Before treatment

Table 2: *Ashta vidha pariksha*

Nadi	*Vata kaphaj*
Mutra	Normal
Mala	*Sama*
Jivha	Coated
Shabda	Normal
Sparsha	Normal
Drik	Normal
Akriti	Normal

Table 3: Systemic examination

Parameter	Finding
Pulse	88/min
BP	120/70 mm Hg
Weight	90 kg
Height	170 cm
Appetite	moderate
Allergy	Nil
Addiction	Nil
Bowl	Irregular
Bladder	Normal
Diet	Vegetarian
Exercise	Very less
Sleep	Disturbed



SONI DIAGNOSTIC CENTRE

Metro Pillar 875, Near Apsra
Barfiwala, Bahadurgarh

7827662077
9667071339

अल्ट्रासाउंड | सी.टी. स्कैन | ईको

DATE: 03/06/2025 | NAME: PARMOD | AGE / SEX: 29 YRS /M

INV.: USG WHOLE ABDOMEN

Gaseous abdomen
No free fluid is seen in abdominal cavity.

LIVER:
Normal in size 145 mm and shows raised echotexture (grade-I fatty infiltration)
Margins are smooth. No focal lesion is seen. IHBR`s are normal. Portal vein is normal.

GALL BLADDER:
Well distended. Wall thickness is normal. No calculus is seen. No mass lesion is seen.
CBD is normal in caliber with clear lumen.

PANCREAS:
Normal in size and echotexture. Pancreatic duct is normal in caliber.

SPLEEN:
Normal in size and normal in echotexture. Splenic vein is normal. No focal lesion is seen.

RIGHT KIDNEY:
Normal in size measuring (dimensions) 109 x 47 mm.
Normal in outline and echogenicity. Corticomedullary differentiation is maintained.
No evidence of calculus or hydronephrotic changes seen

LEFT KIDNEY:
Normal in size measuring (dimensions) 114 x 53 mm
Normal in outline and echogenicity. Corticomedullary differentiation is maintained.
No evidence of calculus or hydronephrotic changes seen

URINARY BLADDER
Well distended. Wall thickness is normal. No calculus / mass lesion is seen.

PROSTATE:
Normal in size and echotexture is normal. Prostatic volume is 15 cc.
No focal mass lesion seen. Bilateral seminal vesicles appear normal.

BOWEL LOOPS:
Visualized bowel loop shows normal peristaltic movement with no abnormal prominence / dilatation. Wall thickness appears normal. Appendix is not visualized

ABDOMINAL LAP:
No significant abdominal lymphadenopathy is seen.

IMPRESSION:

- ***Gaseous abdomen***
- ***Grade I fatty infiltration of liver. Adv: LFT & elastography correlation.***

Please correlate clinically & with other investigations.

DR. PIYUSH SONI (HMC 16561) M.B.B.S (PGIMS ROHTAK), M.D. (PGIMS ROHTAK)
EX. REGISTRAR RML HOSPITAL, AIIMS, DELHI

Figure 3: After treatment (1st follow-up)

Figure 4: After treatment (3rd follow-up)

Table 4: Assessment of sign & symptoms related to liver & obesity.

Parameters	1st month	3rd months	5th months	7th months
***Yakritodar Roga* related signs and symptoms**				
Udarshoola (pain in the abdomen)	Severe	Moderate	Mild	None
Utleksha (feeling of nausea and vomiting)	Severe	Mild	None	None
Hritkantadaha (heartburn)	None	None	None	None
Aruchi (loss of appetite)	None	None	None	None
Height, weight, and BMI				
Height	170 cm	170 cm	170 cm	170 cm
Weight	90 kg	86 kg	84 kg	82 kg
BMI	30.1	29.8	29.1	28.4
Obesity-related signs and symptoms				
Ayusho Hrasa (deficient in longevity)	Mild	None	None	None
Javoparadha (Slow in movement)	None	None	None	None
Krichchavyavaya (difficult to indulge in sexual intercourse)	Mild	Mild	None	None
Daurbalyam (weak)	Moderate	Mild	None	None
Daurgandhya (Bad smell)	Mild	Mild	None	None
Swedabadha (much sweating)	Moderate	Mild	Mild	None
Ati Kshudha (excessive hunger)	Moderate	Mild	None	None
Ati Pipasa (excessive thirst)	Severe	Moderate	Mild	None

BMI: Body mass index

Table 5: Detail yoga intervention protocol

Yogic intervention	Execution time	Frequency	Recovery time	Total time
Trikonasana	3 times on both sides	3 repeats	10 s rest in between	3 min
Paschimottanasna	30 s in One time	4 repeats	10 s rest in between	3 min
Pawanmuktasana	30 s in One time	4 repeats	10 s rest in between	3 min
Gomukhasana	3 times on both sides	3 repeats	10 s rest in between	3 min
Ardhmatseyndrasana	3 times on both sides	3 repeats	10 s rest in between	3 min
Kapalbhati	30 strokes per min	7 repeats	30 s rest in between	10 min
Dhyan	5 min	-	-	5 min