Case Series

A Homeopathic Approach in the Management of Non-Alcoholic Fatty Liver Disease (NAFLD): A Case Series

Kirti Mutreja[1], Susanna Jose Puthenpurayil[2]

From, [1]Consultant Homeopathic Physician & Psychiatrist, Department of Homeopathy, [2]Clinical Research Associate, Department of Medical Research, Bhaktivedanta Hospital and Research Institute, Mira Road, Maharashtra, India

ABSTRACT

Non-alcoholic fatty liver disease (NAFLD) is a prevalent hepatic disorder characterized by excessive lipid accumulation in the liver, independent of alcohol consumption. It is also often associated with metabolic conditions like obesity and diabetes. Liver fibrosis is a major health issue that impacts approximately 100 million people globally, leading to significant morbidity and mortality. It is a common endpoint in many chronic liver diseases and it is characterized by the buildup of collagen and extracellular matrix due to ongoing liver damage. Both clinical and experimental studies indicate that oxidative stress (OS) plays a key role in the development of fibrosis. Furthermore, OS – related molecules may serve as crucial mediators, driving the molecular and cellular mechanisms that facilitate the progression of liver fibrosis. This case series presents three patients with non-alcoholic fatty liver disease (NAFLD) who were managed with homeopathic medications Andrographis Paniculata, Berberis Vulgaris and respective constitutional remedies like Calcarea Phoshoricum, Calcarea Carbonicum, etc. over a period of six months. The ultrasound findings showed varying degrees of hepatic steatosis. Patients had individual profiles based on which remedies were chosen. Andrographis Paniculata and Berberis Vulgaris were prescribed for hepatocellular toxicity, hypertrophy, and inflammation whereas Calcarea Phosphoricum, Calcarea Carbonicum, etc. were intended to improve functions relating to lipid metabolism, detoxification, and homeostasis. This treatment was evaluated using blood tests, imaging, and symptom relief. All three patients experienced a reduction in fatigue and improved digestion, which resulted in positive liver ultrasound and lipid profiles. Andrographis Paniculata and Berberis Vulgaris are very much known for their effects of liver protection, were more effective in the reduction of inflammation in the liver, and Calcarea Phosphoricum or Calcarea Carbonicum helped to balance metabolism. No side effects were reported. This suggests a potential efficacy of these homeopathic medicines in the treatment of NAFLD, thus worth investigating in larger cohorts. Given the absence of FDA-approved treatments for NAFLD, further research is needed to assess the efficacy and long-term benefits of homeopathy in treating NAFLD.

Key words: Non-alcoholic fatty liver disease (NAFLD), Berberis Vulgaris, Andrographis Paniculata, Homeopathic treatment for liver diseases, Oxidative stress.

Non-Alcoholic Fatty Liver (NAFLD) has a strong connection to several metabolic issues such as obesity, type 2 diabetes, dyslipidaemia and hypertension [1]. These problems can make the disease worse leading to serious complications such as liver fibrosis, cirrhosis, liver shutdown, and hepatocellular carcinoma [2]. NAFLD is becoming a worldwide health concern, with predictions showing an increase in the United States from 83.1 million cases in 2015 to 100.9 million by 2030 [3]. In India, it affects between 9% and 53% of the population [4]. In 2020, NAFLD was redefined as metabolic dysfunction-associated fatty liver disease (NAFLD) to better reflect its underlying mechanisms [5]. Right now, there are no treatments for NAFLD approved by the FDA creating a big need for effective treatment options. For hundreds of years, homeopathy and other alternative medicine systems have helped to support liver function, boost detoxification, drain tissues, and restore cells. Studies also show that Traditional Chinese Medicine (TCM) helps fat breakdown making insulin work better, and reducing inflammation, which could help manage NAFLD [6].

Mental and psychological stress is known to trigger and maintain chronic inflammation in the body producing a number of metabolic diseases like type II diabetes, coronary artery disease, PCOD, obesity as well as NAFLD. The uniqueness of this study lies in addressing the psychological causes also along with the physical manifestations.

Access this article online

Quick response code

Received – 28th October 2024
Initial Review – 04th November 2024
Accepted – 08th January 2025

Correspondence to: Dr. Kirti Mutreja, Department of Homeopathy, Bhaktivedanta Hospital and Research Institute, Shrishti Sector 1, Mira road East, Thane , Maharashtra, India 401107.

Email: kirti.m@bhaktivedantahospital.com

Stress causes chronic inflammation which can lead to liver fibrosis through number of pathways like -

- Oxidative stress related NAFLD – There is an imbalance between an increase in the production of ROS in the hepatocytes and a decrease in antioxidant defenses, a phenomenon known as oxidative stress. Oxidative stress plays a critical role in aging, carcinogenesis, and atherosclerosis progression [7, 8, 9]. In NASH, excessive oxidative stress, especially induced by reactive oxygen species (ROS) produced from mitochondria, peroxisomes, and microsomes, causes apoptosis and nuclear and mitochondrial DNA damage. The insufficient antioxidant defenses further exacerbate the development of NASH and promote hepatocarcinogenesis [10, 11]. Oxidative stress-related molecules can serve as mediators, regulating tissue and cellular events that contribute to the progression of liver fibrosis. [12].
- Gut derived toxins - The leaky gut due to inflammation of intestinal linings has a significant role in NAFLD or NASH, hepatocellular carcinoma, cardiac functions, vascular atherosclerosis, diabetes and others. The toxins and lipopolysaccharides from gut may enter the liver through the portal vein, and the likely continuous delivery of these toxic materials into the liver can have a role in the pathogenesis of fibrosis. Patients with NAFLD diagnosed based on a histopathological biopsy evaluation show increased intestinal permeability and disrupted intercellular tight junctions in the intestine. Patients of NAFLD showed significantly elevated plasma endotoxin levels [13].

The objective of this case series is to examine how homeopathy can help manage NAFLD looking at both the physical and mental symptoms of the patient. It will observe how homeopathic treatments affect liver function, progression of liver disease and related issues like obesity and diabetes. The study will also look at the mental health benefits of homeopathy in dealing with the emotional struggles that often come with long-term liver diseases. It will also examine how homeopathy supports the body's cleansing process, helps repair tissues, and aids liver regrowth. Current treatments in the market mask the symptoms, which come back after a few years. This study will check if homeopathy could provide a different approach and a solution that lasts longer.

CASE SERIES

Case 1: A 45-year-old male came to the Homeopathy OPD with complaints of generalized weakness. He was diagnosed with fatty liver grade II, fibrosis 0, and renal calculi. The investigations were marked by high triglycerides and LDL levels (Table 1). The patient's medical history was not significant, but he experienced psychological symptoms like an intense feeling of instability and reduced self-esteem. His mental state had anxiety about small things, financial instability, fear of losing job, insecurity at the workplace and a feeling of being devalued at a place where he had worked for 15 years. He was anxious about not being able to set up and run his own practice as a CA and sought frequent counsel from friends and relatives. He had a good opinion of his own knowledge but was unable to function on that knowledge and had feelings of not being recognized or valued. His emotional state was further charged with fear of death and he had recurring anxious dreams. There was a history of recurrent fungal infections in childhood and of recurrent bleeding piles. His thermal reaction was hot and he complained of pain in his fingers and right knee.

Table 1: Laboratory Parameters of Case 1, Case 2 & Case 3 (Initial and follow up visits)

Parameter	Patient 1 (Initial Visit)	Patient 1 (Follow-up Visit)	Patient 2 (Initial Visit)	Patient 2 (Follow-up Visit)	Patient 3 (Initial Visit)	Patient 3 (Follow-up Visit)
HbA1C	5.7	5.5	5.5	5.4	6.3	5.6
Triglycerides	201	189	154	95	150	135
LDL	133	121	125.2	61	93.2	118
HDL	37.8	38.3	37	38	26	28
Fatty Liver Grade (USG)	Grade II, No Fibrosis	Grade I, No Fibrosis	Grade III, Fibrosis II	Grade II, Fibrosis I	Grade II, No Fibrosis	Grade I, No Fibrosis

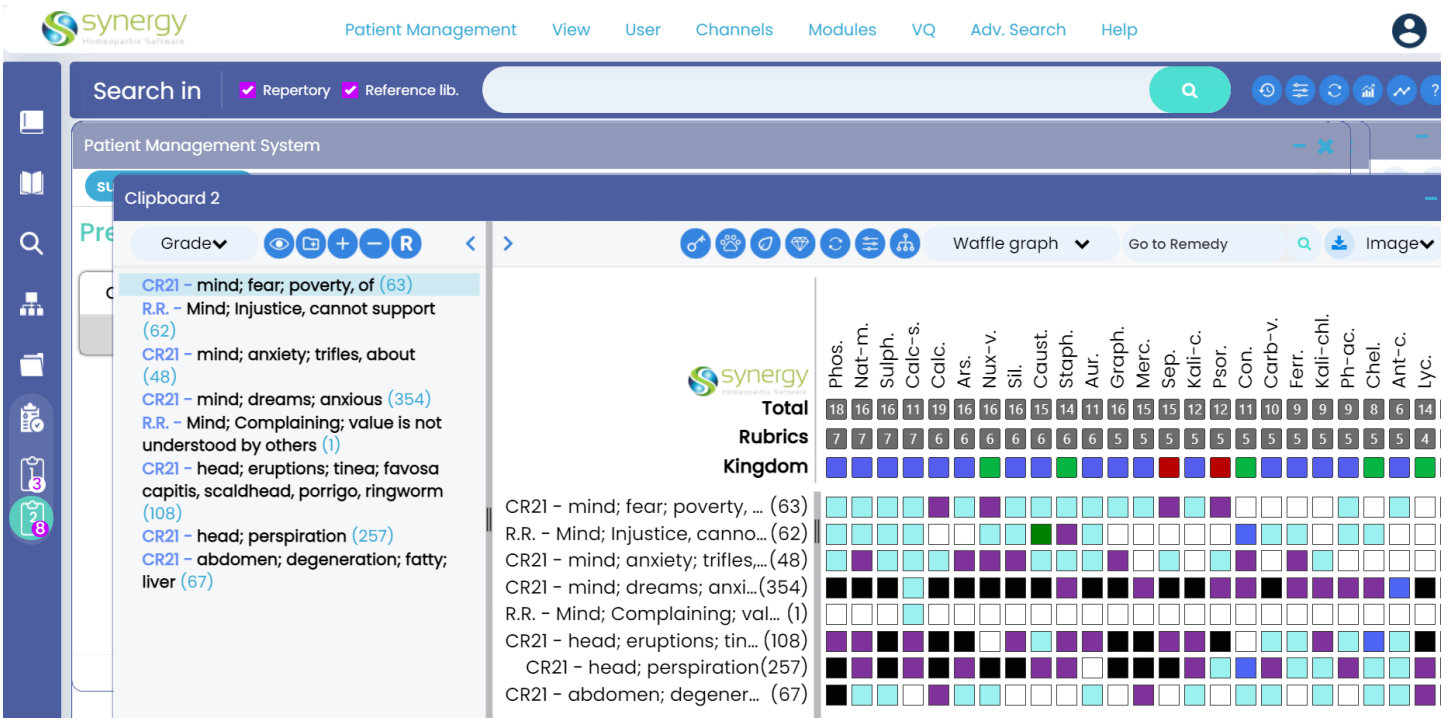

Fig 1: Repertorization Chart of Case 1

The repertorial analysis was carried out based on the patient's physical symptoms and mental state. Remedies were selected accordingly to address both the somatic and psychological aspects of the patient's condition.

Table 2: Treatment Regimen for NAFLD (Based on Repertorial Chart) of Case 1

Date	Observation	Treatment
24/06/2023	Diagnosed with Non-Alcoholic Fatty Liver Grade II and renal calculi.	Calcarea Sulphurica 200C: BD for 2 days. Berberis Vulgaris Q: BD for 1 month. Andrographis Paniculata Q: BD for 1 month.
05/08/2023	Initial follow-up with some ease in anxiety levels.	Calcarea Sulphurica 200C: BD for 2 days. Calcarea Sulphurica LM 6: HS. Berberis Vulgaris Q: BD. Andrographis Paniculata Q: BD.
30/09/2023	Improvement in symptoms	Continued same prescription
02/12/2023	Further improvement in symptoms	Same Prescription continued
27/01/2024	Significant progress noted in USG report, lab tests and symptomatically	Continued same prescribed remedies for 6-8 months.

Outcome:-

The patient showed significant improvement in both physical and emotional health during treatment. Homeopathic remedies like Calcarea Sulphurica, Andrographis Paniculata, and Berberis Vulgaris along with lifestyle changes, helped reduce fatty liver grade, renal calculi, triglycerides, and LDL cholesterol. The patient also reported increased energy and reduced weakness. Emotionally, anxiety related to financial insecurity, fear of failure, and feelings of being devalued at work, all decreased. His ability to handle workplace stress improved, and his fears surrounding health and death lessened. Physical symptoms, such as pain in the fingers and knee and recurrent bleeding piles, also improved, leading to greater comfort in daily activities.

Case 2: A 28-year-old male with an average body weight was incidentally diagnosed with Grade 3 fatty liver and fibrosis II (Table 1). During his consultation, he presented with significant anxiety and health concerns, which were linked to the stress he had been experiencing due to his mother's diagnosis of Stage 3 breast carcinoma. The diagnosis had triggered intense anxiety, leading to heightened emotional and physical distress. Upon further inquiry, the patient reported that the emotional toll of his mother's illness, including her ongoing chemotherapy, had led to extreme anxiety, especially regarding his ability to cope with both the financial and emotional burdens of the situation. He described feeling constantly panicked about his health and the financial instability of his family, expressing particular fear about

whether he would be able to earn enough to support them. Additionally, it was noted that even minor discomforts, such as a slight abdominal pain, would trigger intense anxiety.

His mental state included confusion, absent-mindedness, and a persistent lack of enthusiasm. He frequently felt overwhelmed and expressed regret over his misfortunes. After detailed history taking and lab investigations (Table 1), a repertorial analysis (Fig 1) was conducted, leading to the prescription of a homeopathic treatment plan that included Calcarea Carbonica and Andrographis Paniculata (Table 3). This regimen effectively addressed both his physical symptoms and mental health issues, resulting in significant improvement in liver function and a reduction in anxiety levels, demonstrating the potential of homeopathy in managing both the physical and psychological aspects of the condition.

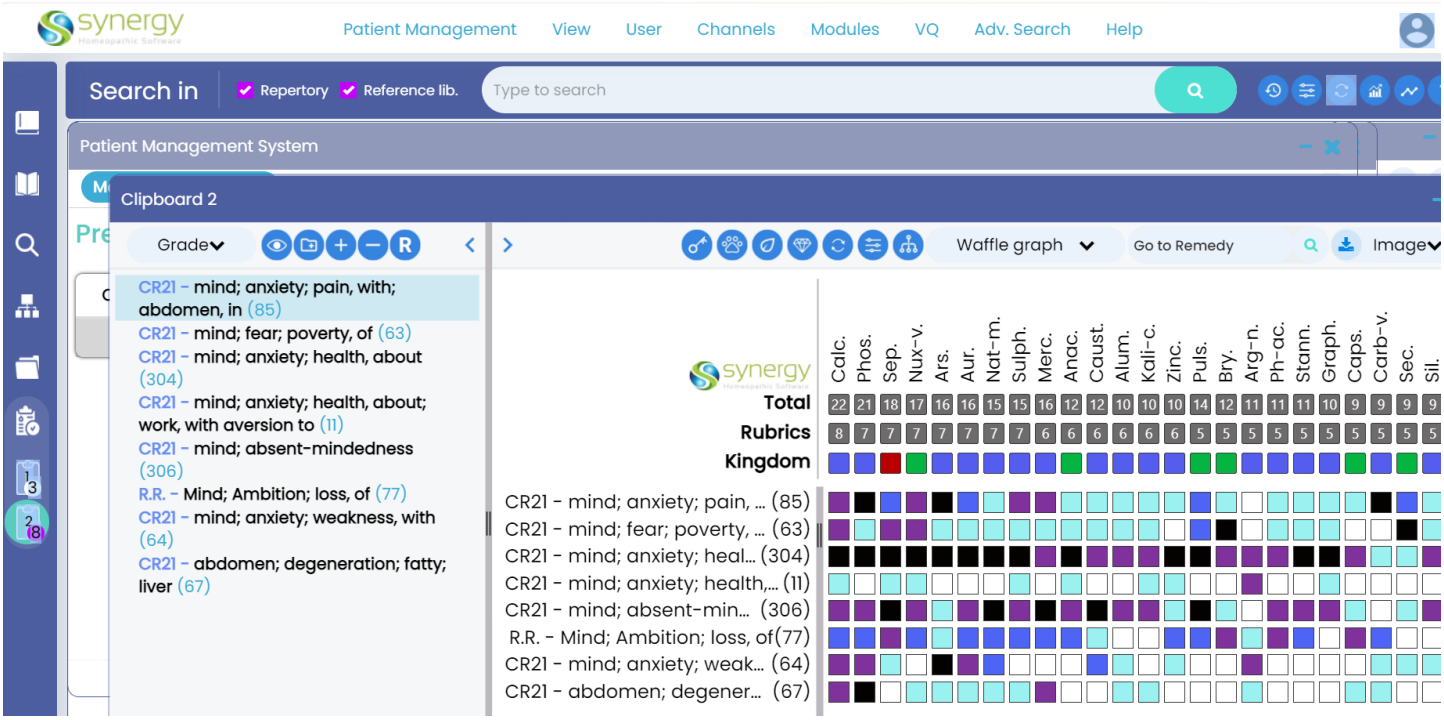

Fig 2: Repertorization chart of Case Report 2

Table 3: Treatment regimen for NAFLD-Case 2 (Based on Repertorial chart)

Date	Observation	Prescription
8/11/22	Diagnosed with Non-Alcoholic Steatohepatitis (NASH) Grade 3	*Calcarea Carbonica* 200C: BD for 2 days *Andrographis Paniculata* Q: BD for 1 month
6/12/22, 7/2/23 28/3/23, 29/4/23 17/5/23, 5/7/23	On subsequent follow ups over 6-8 months, patient's anxiety levels reduced, physical symptoms improved and mentally he could cope better to situations.	*Calcarea Carbonica* 200C: BD for 2 days every month, *Andrographis Paniculata* Q BD continued for 6-8 months.

Outcome:-

The patient's response to the homeopathic treatment indicates a strong alignment between his constitutional and symptomatic profile and the selected remedies. This approach led to significant improvements in his fatty liver condition, as evidenced by a reduction in his lipid profile (Table 1). Additionally, the treatment was effective in alleviating his anxiety, contributing to a noticeable improvement in his overall mental well-being. The combination of Calcarea Carbonica and Andrographis Paniculata not only supported the physical healing of his liver but also addressed the emotional and psychological challenges he faced, demonstrating the holistic benefits of homeopathic care.

Case 3:

A 37-year-old male presented to the Homeopathy OPD with an incidental finding of Grade II fatty liver and Fibrosis 0. His blood tests revealed elevated levels of triglycerides and LDL (Table 1). The patient's medical history was otherwise unremarkable, and he maintained a regular exercise routine. However, his past revealed significant emotional stress, which appeared to have a profound impact on his health. Despite

being a very friendly and outgoing individual, he had never received much attention or support at home, which led to feelings of neglect. He had aspired to become a cricketer or pursue a career in sports but was unable to do so due to financial constraints and a lack of family support. Even now, he spends considerable time playing cricket on weekends and engaging in regular exercise to maintain his health, but he was deeply concerned and disturbed by the recent diagnosis of fatty liver.

His emotional history was marked by a constant, intense fear of poverty, which had persisted throughout his childhood, and fear of accidents, both for himself and his family. Additionally, he expressed significant anxiety about the health of his family members. Based on his mental and physical profile (Table 1), a repertorial analysis (Fig. 3) was conducted, leading to a personalized treatment plan. This case highlights the role of emotional stress and deep-seated fears in the development of physical conditions such as fatty liver, and underscores the importance of addressing both mental and physical causes in the treatment plan.

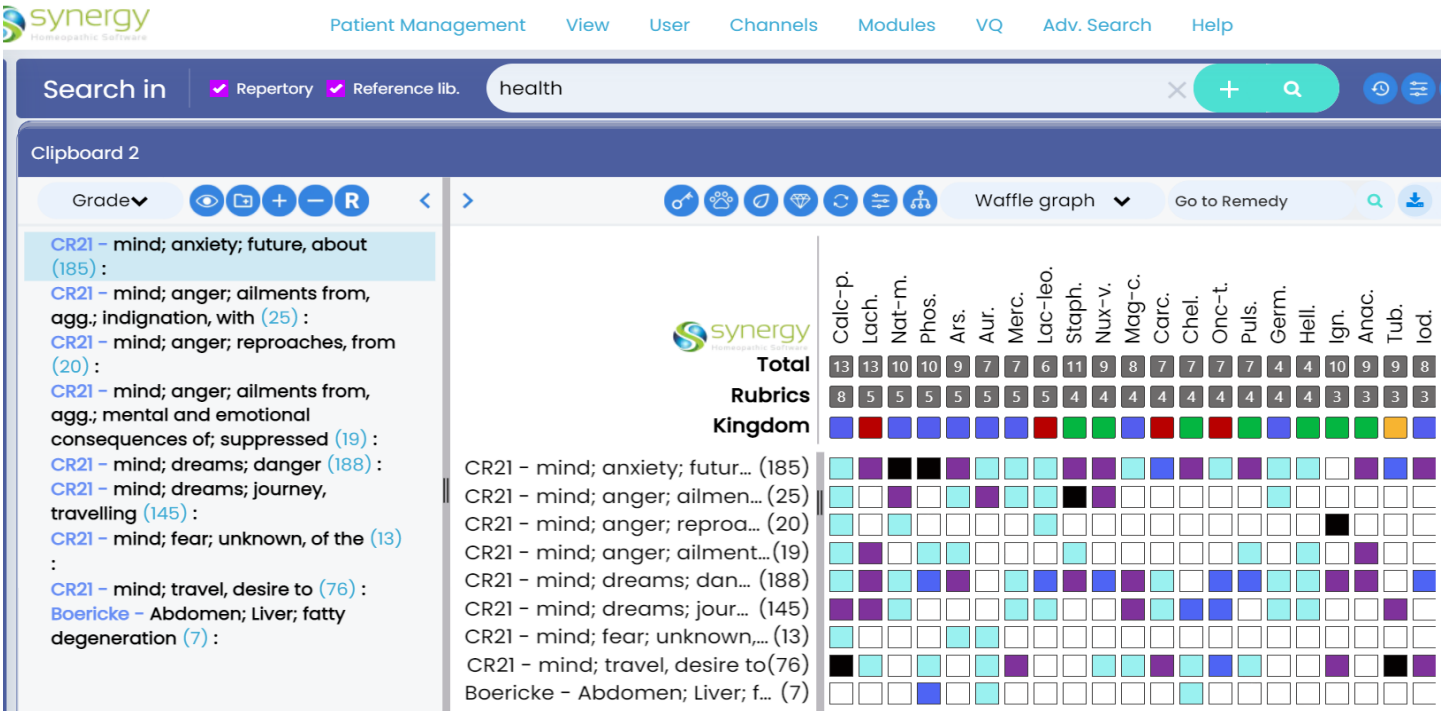

Fig 3: Repertorization chart of Case3

Table 4: Treatment regimen for NAFLD-Case 3 (Based on Repertorial chart)

Date	Observation	Treatment
09/07/2022	Diagnosed with Non-Alcoholic Steatohepatitis (NASH) Grade 2, no symptoms	*Calcarea Phosphoricum* 200C: BD for 2 days
23/07/2022	No new symptoms reported	*Calcarea Phosphoricum* 200C: BD for 2 days. *Androcarpus Panniculata* Q BD 1 month
28/8/2022	No Symptoms	Continue same treatment
1/10/2022	No new complaints	Same medications continued
05/11/2022	Mentally feeling stronger and less anxious	Continued same treatment
22/01/2023	Feeling relaxed mentally and improvement in sonographical and blood reports	Patient advised to continue medications for another 3 months but he chose to end treatment

Outcome:-

The patient's response to the homeopathic treatment was notable, with significant improvements in both his physical and emotional health. Following the prescribed remedies, his liver condition showed positive changes, including a reduction in the levels of triglycerides and LDL, as reflected in his follow-up blood tests (Table 1). The patient reported a decrease in anxiety levels, particularly regarding his fears of poverty and accidents, which had been a significant source of stress. His overall emotional well-being improved, with a reduction in the constant worry about the health of his family members. Furthermore, he expressed a greater sense of calm and control over his health, which allowed him to feel more confident in managing his condition. The holistic approach that addressed both his physical symptoms and emotional challenges proved effective, underscoring the importance of treating the individual as a whole in homeopathic care.

DISCUSSION

The management of NAFLD is a great task in contemporary medicine because of its complex aetiology including chronic inflammation, dyslipidaemia, insulin resistance, and metabolic syndrome [14]. Interest in complementary therapies, such as homoeopathy, is rapidly growing alongside conventional treatments like lifestyle changes and medications. Homeopathy may offer a unique approach in the treatment of NAFLD by targeting the stress response pathways, chronic inflammation and lipid metabolism, all important factors in the pathophysiology of the disease. Being holistic in nature, it allows for the selection of remedies that can influence stress response of patients, their metabolic pathways and reverse fatty degeneration of the liver. Notably, some remedies like Andrographis paniculata and Berberis vulgaris have shown hepatoprotective and lipid-lowering effects, indicating their potential benefits in the management of NAFLD [15]. Berberis vulgaris is a significant homeopathic remedy that might help in treating lipid metabolism.

According to a study in 2015, the extracts of Berberis vulgaris reduced serum transaminase in patients with NAFLD significantly. This shows hepatoprotective effects [15]. Homeopathic drugs can be selected according to individual patient profiles to allow for a tailored approach to the treatment by considering the various physical and psychological factors that affect lipid metabolism. By addressing the underlying psychological factors working along the Psycho-Neuro-Endocrino-Immunological axis as well as metabolic dysfunctions associated with NAFLD, homeopathy could potentially complement conventional treatments and lifestyle modifications aimed at improving lipid metabolism.

While lifestyle changes and medications remain the mainstay, there is growing enthusiasm for alternative methods, such as herbal medicines, in the treatment of NAFLD. Berberine, a main constituent of Berberis vulgaris, has been reported to be effective in lipid metabolism enhancement through the activation of AMP-activated protein kinase (AMPK), a master switch for energy metabolism. This activation pathway favors the oxidation of fatty acids and the inhibition of lipogenic processes, with the result of less fat deposit in the liver thus improving liver function [16]. Andrographis paniculata also contains andrographolide, which has anti-inflammatory and antioxidant properties. Studies have shown that this substance can reduce the inflammatory and oxidative stress in the liver.

It enhances the sensitivity to insulin and decreases lipid peroxidation which contributes to a healthy lipid profile and improved liver function [17]. In addition, homeopathy offers individualized treatment by focusing on both physical and psychological factors affecting each patient. By targeting these aspects, homeopathy can complement conventional therapies, potentially enhancing their effectiveness in NAFLD management. However, while these herbal and homeopathic remedies show promise, rigorous clinical studies are needed to establish their efficacy and safety fully.

CONCLUSION

Homeopathy offers a unique and holistic approach to managing NAFLD, particularly through its potential effects on stress regulation and lipid metabolism. Remedies such as *Berberis vulgaris* and *Andrographis paniculata* may play a significant role in improving liver function and lipid profiles. However, further research is needed to validate these effects through rigorous clinical trials and to explore the mechanisms by which homeopathic treatments can influence lipid metabolism in NAFLD patients. By integrating homeopathy with conventional treatments and lifestyle modifications, healthcare providers may enhance patient outcomes and provide a more comprehensive management plan for NAFLD. The small sample size and absence of control groups in these case reports limit the ability to generalize findings.

Future directives: Future studies should incorporate randomized controlled trials with larger participant cohorts, objective outcome measures, and extended follow-up periods to validate the efficacy of homeopathic interventions for NAFLD. Additionally, the potential impacts of conventional treatments and lifestyle modifications warrant further investigation in conjunction with homeopathic approaches.

Acknowledgements: We would like to acknowledge Dr. Hariharan A. Mani (Clinical Research Coordinator, Bhaktivedanta Hospital and Research Institute) for his efforts in editing the manuscript as per journal requirement.

REFERENCES

1. Katagiri H, Yamada T, Oka Y. Adiposity and Cardiovascular Disorders. Circulation Research. 2007; 101(1):27–39.

2. D'Amico G, Morabito A, D'Amico M, *et al*. Clinical states of cirrhosis and competing risks. Journal of Hepatology. 2018; 68(3):563–76.
3. Estes C, Razavi H, Loomba R, *et al*. Modeling the epidemic of nonalcoholic fatty liver disease demonstrates an exponential increase in burden of disease. Hepatology. 2017; 67(1):123–33.
4. Duseja A, Singh SP, De A, *et al*. Indian National Association for Study of the Liver (INASL) Guidance Paper on Nomenclature, Diagnosis and Treatment of Non-alcoholic Fatty Liver Disease (NAFLD). Journal of Clinical and Experimental Hepatology. 2022.
5. Ludwig J, Viggiano TR, McGill DB, *et al*. Nonalcoholic steatohepatitis: Mayo Clinic experiences with a hitherto unnamed disease. Mayo Clinic Proceedings. 1980; 55(7):434–8.
6. Ding X, He X, Tang B, *et al*. Integrated traditional Chinese and Western medicine in the prevention and treatment of non-alcoholic fatty liver disease: future directions and strategies. Chinese medicine (London). 2024; 19(1).
7. Koek GH, Liedorp PR, Bast A. The role of oxidative stress in non-alcoholic steatohepatitis. Clinica chimica acta. 2011; 412(15-16):1297-305.
8. Rolo AP, Teodoro JS, Palmeira CM. Role of oxidative stress in the pathogenesis of nonalcoholic steatohepatitis. Free radical biology and medicine. 2012; 52(1):59-69.
9. Takaki A, Kawai D, Yamamoto K. Multiple hits, including oxidative stress, as pathogenesis and treatment target in non-alcoholic steatohepatitis (NASH). International journal of molecular sciences. 2013; 14(10):20704-28.
10. Bugianesi E. Non-alcoholic Steatohepatitis and Cancer. Clinics in Liver Disease. 2007; 11(1):191–207.
11. GUTTERIDGE JMC, HALLIWELL B. Free Radicals and Antioxidants in the Year 2000: A Historical Look to the Future. Annals of the New York Academy of Sciences. 2006; 899(1):136–47.
12. Friedman SL. Molecular Regulation of Hepatic Fibrosis, an Integrated Cellular Response to Tissue Injury. Journal of Biological Chemistry. 2000; 275(4):2247–50.
13. Miele L, Valenza V, La Torre G, *et al*. Increased intestinal permeability and tight junction alterations in nonalcoholic fatty liver disease. Hepatology (Baltimore, Md). 2009; 49(6):1877–87.
14. De A, Duseja A. Nonalcoholic Fatty Liver Disease: Indian Perspective. Clinical Liver Disease. 2021.
15. Iloon Kashkooli R, Najafi SS, Sharif F, *et al*. The Effect of Berberis Vulgaris Extract on Transaminase Activities in Non-Alcoholic Fatty Liver Disease. Hepatitis Monthly. 2015; 15(2).
16. Zhu X, Bian H, Wang L, *et al*. Berberine attenuates nonalcoholic hepatic steatosis through the AMPK-SREBP-1c-SCD1 pathway. Free radical biology & medicine. 2019; 141:192–204.
17. Li X, Yuan W, Wu J, *et al*. Andrographolide, a natural anti-inflammatory agent: An Update. Frontiers in Pharmacology. 2022; 13.

How to cite this article: Mutreja K, Puthenpurayil SJ. A Homeopathic Approach in the Management of Non-Alcoholic Fatty Liver Disease (NAFLD): A Case Series. Indian J Integr Med. 2025; 5(1)41-47.

Funding: None; *Conflicts of Interest: None Stated*