



International Journal of Alternative and Complementary Medicine

Available at www.saapjournals.org

ISSN: 2583-1305



EFFECT OF ONE-MONTH SHATKARMA INTERVENTION ON HYPERTRIGLYCERIDEMIA: A CASE STUDY

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Received: 04 July 2024 Revised: 19 July 2024 Accepted: 14 Aug 2024

Abstract

High triglyceride levels can increase the risk of heart disease, so finding effective ways to manage them is important. Traditional yoga practices, especially Shatkarma, are being looked at for their potential benefits on cardiovascular health. This present case report explores one-month Shatkarma intervention on hypertriglyceridemia of a middle-aged male. A 58-year-old man with very high triglycerides (598.77 mg/dl) was admitted to Patanjali Ayurveda Hospital, based on his pre-examination he was transferred to Shatkarma department for further procedure. He then participated in a one-month Shatkarma program, which included ShankhaPrakshalana (done once), KunjalKriya (twice a week), and Jal Neti and Trataka (alternate day). After the month-long program, his triglyceride levels dropped significantly from 598.77 mg/dl to 114.5 mg/dl. This case shows that Shatkarma practices can significantly lower triglyceride levels. The results suggest that combining traditional yoga practices with conventional treatments could be a helpful way to manage high triglycerides. However, since everyone's body responds differently; more research is needed to fully understand how these practices work and their long-term benefits.

Keywords: Shatkarma, Hypertriglyceridemia, Yoga therapy, Cardiovascular health, Non-pharmacological treatment

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DOI: <https://doi.org/10.46797/ijacm.v5i2.625>

Produced and Published by

South Asian Academic Publications

Introduction

Cardiovascular diseases (CVDs) are becoming the primary cause of mortality worldwide, with 17.9 million deaths in 2019 alone, accounting for 32% of global mortality. Out of these, 85% deaths were caused by heart attacks and strokes [1]. Hypertriglyceridemia, characterized by elevated triglyceride levels, is an important CVD risk factor [2]. Several epidemiological studies have revealed a widespread presence of hypertriglyceridemia globally, contributing significantly to the overall burden of morbidity and mortality associated with CVD worldwide [3]. In its early stages, hypertriglyceridemia is asymptomatic but may exhibit various clinical symptoms as it progresses including pain in the mid-epigastric, chest, or back region, nausea, vomiting and dyspnea [4].

The use of pharmacological interventions, although effective in managing hypertriglyceridemia, it is associated with potential side effects and may not always be

sufficient to achieve optimal lipid control [5]. In recent years, there has been interest in non-pharmacological interventions such as lifestyle modifications and complementary therapies such as yoga to manage hypertriglyceridemia and reduce the risk of CVD [6]. Yoga is an ancient practice involves a variety of physical posture (asanas), breathing exercises (pranayama), meditation (dhyana) and purification techniques known as shatkarmas [7]. The practices of shatkarmas aimed at purifying the body and promoting overall well-being, have gained attention for its potential therapeutic effects on cardiovascular health [8]. Several studies have examined the relationship between yoga and lipid profile parameters, with yoga interventions being associated with improved lipid profile parameters, including reduction in total cholesterol, triglycerides, LDL cholesterol and increase in HDL cholesterol levels [9]. These beneficial effects can be attributed to the versatile nature of yoga practice, which integrates physical activity, stress reduction and relaxation techniques, targeting both physiological and psychological factors involved in lipid metabolism [7].

Despite a growing body of literature examining the relationship between yoga and lipid profile parameters, few studies have examined the specific effects of shatkarma in improving lipid profile and reducing cardiovascular risk. Therefore, the aim of this case report

is to explore the effect of a one-month shatkarma intervention on the triglyceride profile of a middle-aged male suffering from hypertriglyceridemia.

Case Presentation

A 58-year-old male patient presented at Patanjali Ayurveda Hospital with his patient ID: 10241862 on April 30, 2024, expressing concerns about his lipid profile and a desire to explore non-pharmacological interventions for heart health. He was referred to the Shatkarma department, where a structured one-month Shatkarma intervention was introduced. The patient had no history of tobacco smoking, alcohol consumption, or substance abuse.

Upon initial assessment, a comprehensive clinical evaluation and laboratory tests were conducted. The baseline lipid profile revealed elevated serum triglycerides (598.77 mg/dl), indicating hypertriglyceridemia and increased CVD risk. The patient had no co-existing diseases and was not on any medication for hypertriglyceridemia.

In response to the patient's condition and clinical findings, a one-month Shatkarma intervention was designed, incorporating ShankhaPrakshalana, KunjalKriya, Jal Neti, and Trataka. The intervention was conducted from May 1, 2024, to May 30, 2024. ShankhaPrakshalana, a gastrointestinal cleansing technique, was performed once during the intervention period. KunjalKriya practice involving induced vomiting to cleanse the upper digestive tract, was performed twice a week. Jal Neti, a nasal cleansing technique, and Trataka, a focused gazing practice, were performed alternate day for the entire month.

Following the completion of the intervention, a follow-up lipid profile assessment was conducted. The post-intervention results showed a significant reduction in serum triglycerides from 598.77 mg/dl to 114.5 mg/dl. No treatment complications were reported during the intervention.

Table 1: Socio demographic characteristics of the study participant

Socio-demographic characteristics	Values
Age	58 years
Gender	Male
Occupation	Businessman
Location	Madhya Pradesh
Ethnicity	Central Indian

Intervention detail

In response to patient concerns and the clinical findings, a one-month Shatkarma intervention was designed and implemented under the supervision of a qualified Shatkarma therapist. The one-month Shatkarma intervention was conducted from May 1, 2024 to May 30, 2024 comprised four purification techniques: ShankhaPrakshalana, KunjalKriya, Jal Neti, and Trataka.

Table 2: Detail of Shatkarma Intervention

Date	Shatkarma Technique	Frequency	Description
01-May-24	ShankhaPrakshalana	Once	Involves drinking several glasses of saline water followed by specific yoga postures involves tadasana, tiryakatadasana, katichakrasana, tiryakabhujangasana, and udarakarshan to facilitate the movement of water through the digestive tract
May 01 - May 30, 2024	KunjalKriya	Twice a week (Tuesdays and Fridays)	Involves drinking lukewarm saline water and then inducing vomiting to cleanse the upper digestive tract
May 01 - May 30, 2024	Jal Neti	Alternate days (starting from May 01)	Involves using a neti pot filled with saline water to flush out the nasal passages, performed by tilting the head and allowing water to flow through one nostril and out the other
May 01 - May 30, 2024	Trataka	Alternate days (starting from May 01)	Involves staring at a fixed point of a candle flame, without blinking for a set period, followed by closing the eyes and visualizing the image internally

Table 3: Lipid Profile characteristics of participant at baseline and after one-week of Shatkarma intervention

Variable	Before	After	Biological Reference Interval
Serum Triglycerides	598.77 mg/dl	114.5 mg/dl	10.0-190.0

Discussion

This case report presents the effects of a one-month Shatkarma intervention on the hypertriglyceridemia profile of a 58-year-old male patient. The improvements observed in triglyceride levels after the intervention are consistent with the existing literature on the potential benefits of yoga and related practices on cardiovascular

health markers. Previous studies have demonstrated that yoga can positively influence lipid parameters including total cholesterol, LDL cholesterol, HDL cholesterol and triglycerides [10, 11]. However, this case specifically focuses on the immediate effect of a one-month Shatkarma intervention on triglycerides, providing a more targeted approach to understanding its potential benefits in the management of hypertriglyceridemia.

The improvement in triglyceride levels after Shatkarma intervention can be attributed to several physiological mechanisms associated with these practices. ShankhaPrakshalana, which involves drinking salt water to cleanse the gastrointestinal tract followed by performing specific asana, is believed to stimulate digestion, boost metabolism and remove accumulated toxins from the body [12]. This detoxification process may contribute to improved lipid profile by reducing the overall metabolic load and increasing the body's ability to process lipids more efficiently.

KunjalKriya, a practice involving induced vomiting to cleanse the upper digestive tract, is believed to improve digestion and regulate lipid levels by removing toxins that cause metabolic disorders [13]. Daily practice of KunjalKriya during the intervention played a role in the observed reduction in serum triglycerides. Additionally, this process may stimulate the vagus nerve, which is important in regulating various metabolic processes, including lipid metabolism [13].

Jalaneti, a method of nasal cleansing using saline water, may indirectly affect lipid metabolism by reducing stress and improving respiratory function [14]. Reducing stress through yoga practices is associated with a decrease in cortisol levels and sympathetic nerve activity, both of which affect lipid metabolism [15]. Improved respiratory function may increase oxygenation and circulation, which contribute to improved lipid utilization and regulation [16].

Trataka, a yogic practice that involves focused attention, is believed to improve concentration and mental clarity. This process may promote relaxation and reduce psychological stress [17], which may affect lipid metabolism through neuroendocrine pathways. Reducing stress may modify hormonal factors such as cortisol and adrenaline, which affect lipid synthesis and utilization [18].

This case shows that Shatkarma practices can potentially help manage high triglyceride levels. By focusing on specific yoga techniques, we gain a better understanding of how different parts of yoga might affect triglyceride levels. It also highlights the importance of combining traditional yoga practices with conventional medical treatments and healthy lifestyle changes for managing lipid levels.

The way yoga influences lipid levels is complex and varies from person to person. Factors like diet and lifestyle can also affect the results. More research with well-designed studies is needed to clearly understand how these yoga practices work and to confirm their benefits.

Conclusion

The significant reduction in triglyceride levels following the one-month Shatkarma intervention suggests potential therapeutic benefits of these traditional yogic practices in managing hypertriglyceridemia. Further research with larger sample sizes and control groups is necessary to validate these findings and explore the long-term effects of Shatkaras on lipid metabolism and cardiovascular health. Integrating qualitative assessments of patient experiences and adherence to Shatkarma practices could provide deeper insights into the effective implementation of these techniques in routine healthcare.

Funding

The authors received no financial support for the research, authorship, and/or publication of this case study.

Acknowledgement

We would like to extend our sincere thanks to all the yoga therapists at the Yog-Shatkarma Clinic and Research Centre, Patanjali Ayurveda Hospital, Haridwar, Uttarakhand, India, for their invaluable assistance and support during the intervention. Their expertise and dedication were instrumental in the successful execution of this study.

Conflict of Interest

The authors declare that there are no conflicts of interest regarding the publication of this case study.

Informed Consent

Informed consent was obtained from the patient for the publication of this case study.

Ethical Statement

The study was conducted in accordance with ethical standards.

Author Contribution

Monika Sharma: Conceptualization, Data Collection, and Writing of the Manuscript Vipin Rathore: Writing of the Manuscript, Data Interpretation, and Review Sachin Tyagi: Intervention and Interpretation of Results Nidheesh Yadav: Manuscript Review and Supervision

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