Case Report

Hypertriglyceridemia treated with Fucus vesiculosus – A case series

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1. Introduction

Hypertriglyceridemia (HTG) is a significant disease condition needing medical attention. However, it has been much neglected due to the burden of other untreatable diseases. The disease consequences pertaining to HTG are much alarming as those of coronary artery disease (CAD), if left untreated and unnoticed. HTG is a term which defines an abnormal level of triglycerides in the blood; in layman terminology called as rise in bad cholesterol which may be detrimental to the blood circulation and functioning of the heart. According to the National Cholesterol Education Program Adult Treatment Panel (NCEP ATP III) guidelines, the normal triglyceride level is <150 mg/dL (Table 1) [1]. HTG is further classified into two categories: primary and secondary, based on their origin. Primary category is the result of various genetic defects leading to disordered triglyceride metabolism. Secondary causes are acquired, such as, high lipid diet, obesity, diabetes, hypothyroidism, and certain medications. However, HTG is typically not an isolated abnormality and is frequently associated with other lipid abnormalities and the metabolic syndrome (abdominal obesity, insulin resistance, low high-density lipoprotein (HDL), high triglyceride, and hypertension), which are linked to CAD [2]. On the other hand, many other studies have shown HTG to be an independent risk factor for Coronary Heart Disease (CHD) even after maintaining normal levels of HDL and LDL [3–5]. Furthermore, the NCEP considers HTG to be an independent risk factor for CHD and calls for medical treatment in cases where therapeutic lifestyle changes (TLC) are not adequate to reduce the triglycerides to appropriate levels [1].

The diagnosis of HTG can be arrived with fasting blood sample for lipid profile. The NCEP recommends obtaining a fasting lipid panel [total cholesterol, low-density lipoprotein (LDL), HDL, and triglycerides] from patients from the age of 20 years and repeated every 5 years [strength of recommendation (SOR)-C] [1]. The first-line treatment in conventional system of medicine is statin therapy which is undergoing a lot of criticism for side-effects on its long-term use in recent times [1]. Although controversies are prevailing, various studies reveal statin toxicity with long-term and high-dose statin use [6]. In this context, Homoeopathy can offer a better alternative in the treatment of HTG. Five cases treated with Homoeopathic medicine – Fucus vesiculosus (FV) in mother tincture form (procured from standard Homoeopathic pharmaceutical companies) showed significant reduction in triglyceride levels along with other parameters of lipid profile. Further authentication of results with significant sample sizes may be taken up.

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here. FV preparation is given in the Indian Homoeopathic Pharmacopoeia (HPI) [7] and its source authority was found from Allen Encyclopaedia [8]. This drug has been taken up keeping in view the findings of a previous study [9] done on albino rats (cafeteria diet-induced and chemical-induced obese models simulating human models) where this drug has shown its positive role in the reduction of triglyceride levels and also on other parameters of lipid models where this drug has shown its positive role in the reduction of triglyceride levels and also on other parameters of lipid models simulating human models. The patients were asked to gradually taper the dosage of the medicine as follows: FV mother tincture 15 drops (0.75 ml) in 30 ml of water twice daily for one fortnight, once daily FV mother tincture was found to be normal except lipid profile where the triglyceride levels were high since 3 years. Even with the use of antilipidaemic medicines, the triglyceride levels were not showing any remarkable reduction. The patient was asked to stop the antilipidaemic medicines and to continue the oral hypoglycemic and antihypertensive drugs as usual.

2.4. Case no. 4

The patient was a 33-year-old male diagnosed with HTG. He had a history of hypothyroidism since 1 year and was taking conventional treatment to keep it under control. The patient had been diabetic since 2 years and was on oral hypoglycaemic drugs to keep sugar levels under control. During routine tests, the lipid profile showed an increase in triglycerides and LDL levels with borderline total cholesterol. The patient had not started any medication yet.

2.5. Case no. 5

The patient was a 50-year-old female diagnosed with HTG. She underwent a hysterectomy due to uterine fibroids 2 years ago. During routine blood tests, she was found to have high triglyceride levels with elevated total cholesterol. She had not started any other medication yet.

3. Diagnostic procedure and assessment

The condition was diagnosed through an assessment of triglyceride levels in the lipid profile done from fasting blood sample drawn by CHOD/POD liquid enzymatic method [11]. The lipid profile was repeated at entry and after every 4 months for assessment.

4. Therapeutic intervention and assessment

All the five cases as per classification of triglyceride levels fell under the high category [1] as shown in Table 1. They were all prescribed with FV mother tincture 15 drops (0.75 ml) in 30 ml of water thrice daily before meals for 4 months which falls under a safe dose as opined in British Herbal Compendium 1992 [12] as well as the Homoeopathic Materia Medica [13,14]. The lipid profile was repeated after 4 months and the triglyceride levels of the five cases showed a significant reduction to within normal limits. Along with this finding, it was also observed that the borderline cholesterol levels and high LDL levels in 2 cases were found to be normal. The patient was a 30-year-old male with HTG of recent origin and had not taken any other medication. He complained of breathlessness while ascending stairs and while exercising since 6 months. When routine investigations had been done, the results showed high triglyceride levels with borderline total cholesterol. All other generals were found to be normal.

2.2. Case no.2

The patient was a 39-year-old female diagnosed with HTG. She was obese with a history of occasional chest pain since 2 months. All the reports ECG, 2D Echo etc were found to be normal except the lipid profile where the triglyceride levels were high. The patient had a history of hypothyroidism and was on conventional medicine with thyroid levels under control.

2.3. Case no.3

The patient was a 48-year-old male diagnosed with HTG. He was obese with a history of diabetes and hypertension since 2 years and had been taking conventional treatment for the same. All the reports were found to be under normal limits except lipid profile where the triglyceride levels were high since 3 years. Even with the use of antilipidaemic medicines, the triglyceride levels were not showing any remarkable reduction. The patient was asked to stop...
The positive role of FV mother tincture is seen in the above signifiers. The patients reported back next fortnight, and once in a week for the next fortnight and stop completely for the next two months. The patients were prescribed with Homoeopathic constitutional medicines once in a month and 3 cases reported once in 2 months. They were asked to repeat the lipid profile once in 4 months and only a placebo was prescribed for the 4 months. The lipid profiles of the five cases after four months were found to be normal. Hereafter, the patients were prescribed with Homoeopathic constitutional medicines based on their respective totality of symptoms and were advised to check their lipid profiles once in 4 months and report if any changes were observed. The lipid profile reports of all the cases (except for one), at entry and at 4th, 8th, and 12th months were done at 10

The prescription of FV mother tincture was given to the cases that had come to the OPD with immediate diagnosis and also those who either didn't start any other medication or had no reduction in the lipid profile even after taking conventional medicines for a period. Keeping in view a previous study [9] that had used this drug on albino rats where it had it's positive effect on the reduction of the triglyceride levels and on other parameters of lipid profile, FV mother tincture was prescribed. In a research perspective, FV, commonly named as seaweed or bladder-wrack possesses bioactive ingredients such as, fucoidan, phlorotannin, and fucoxanthin, which are known for their significant antioxidative, anti-obesity, anticoagulant, and other properties as explored in vitro and in vivo models. Fucoxanthin, especially, causes thermogenesis and lipolysis affecting the adipose tissue and influences the modification the lipid metabolism which may result in the reduction of cholesterol levels. Also, seaweeds are identified as potential rich sources of ingredients which have health-promoting and therapeutic effects for disease prevention [15,16]. Data available from existing basic research and clinical trials on homoeopathic mother tincture form of medicines showed effectiveness affirming positive results in the absence of a definitive mechanism of action; however, possibility of multiple mechanisms of action to be explored through further research cannot be excluded [17]. A plausible scientific action of Homoeopathic micro-doses has been well-explained by a proposed model based on nanostructures existence and nanoparticle actions which insists on logic and rationality confirmed by few modern nanoparticulate studies on Homoeopathic medicines [18–20]. Thus, affirming the same, the treated cases showed a significant level of reduction in the triglyceride levels within 4 months. The positive role of FV mother tincture is seen in the above five cases. However, for further authentication of the results, studies with significant representative sample size such as, randomized controlled trials, may be taken up.

### 6. Discussion and conclusion

The consent to publish the information obtained from the patients.

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None.

**Conflict of interest**

None.

**Appendix A. Supplementary data**

Supplementary data to this article can be found online at https://doi.org/10.1016/j.jaim.2021.04.014.

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