Case #873: A Case Study Evaluating the Effects of a Phytosterol and Soy Protein Functional Food Program in a Patient with Hyperlipidemia

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PURPOSE

This study was designed to assess the effectiveness of a targeted nutritional support program featuring a phytosterol and soy protein functional food (provided in powdered beverage form) used in combination with a low-glycemic-index (GI) dietary plan and regular exercise in a patient with hyperlipidemia.

PATIENT'S PRESENTATION AND HISTORY

A 46-year-old female presented with elevated blood cholesterol. Other than her cholesterol concerns, the patient reported her overall health to be good. She was on a lowfat diet and regularly exercised 3 times per week. The patient had a maternal family history of hypertension, as well as a sibling and an aunt with type 2 diabetes.

Patient's Objective Information

- BMI† was 27.9, height was 66", and weight was 173 lb
- Triglycerides (183 mg/dL), total cholesterol (240 mg/dL), and LDL cholesterol (193 mg/dL) were elevated
- BP 130/80
- Physical exam was essentially unremarkable; angular stomatitis noted
- CBC and chemistry profile were within reference range

PLAN AND RESULTS

The patient was instructed to begin:

- Phytosterol and soy protein functional food, 2 scoops one to two times daily
- Low-GI dietary plan with no calorie restrictions
- Maintain exercise program

3 Weeks after Starting Phytosterol and Soy Protein Functional Food Program

After 3 weeks on the program, the patient reported doing very well and was pleased that "food was not controlling her life." She also reported feeling more energetic and very positive about the program. The patient was consuming 1½ servings (3 scoops) daily of the phytosterol and soy protein functional food. Although she reported some symptoms of bloating and loose stools while adjusting to the functional food, the symptoms were diminishing. The patient was instructed to continue on the recommended program with the addition of ground flax meal, 1-2 tsp per day.

6 Weeks after Starting Phytosterol and Soy Protein Functional Food Program

At 6 weeks, the patient was consuming 2 servings of the functional food per day and was compliant with the low-GI dietary plan. She had contracted an ear infection, which precluded her from exercising for about 1½ weeks. Laboratory results indicated that her elevated lipids had resolved.

7 Weeks after Starting Phytosterol and Soy Protein Functional Food Program

The patient reported feeling very well after 7 weeks. Her angular stomatitis and daytime sleepiness had improved, and she was no longer having what appeared to be hypoglycemic swings. The patient weighed 163 lb, for a total loss of 10 lb.

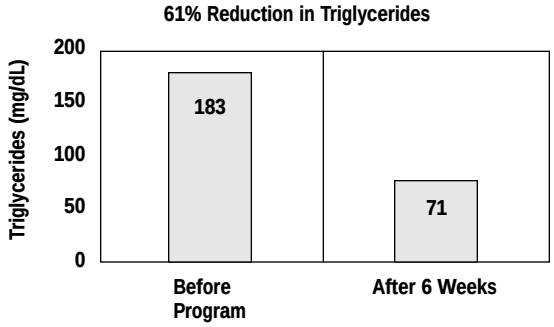

Figure 1. After 6 weeks, the patient's triglycerides decreased from 183 mg/dL to 71 mg/dL (reference range: 10-175 mg/dL). The result suggests a substantial improvement in the patient's triglycerides with the phytosterol and soy protein functional food program.

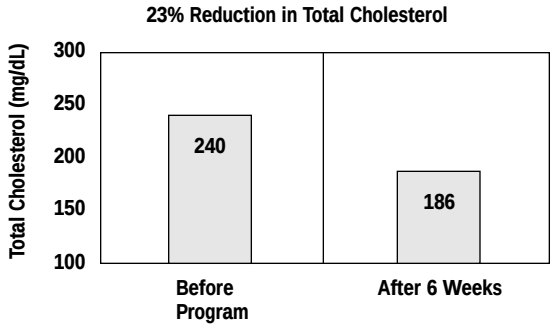

Figure 2. After 6 weeks, the patient's total cholesterol was reduced from 240 mg/dL to 186 mg/dL (reference range: 120-200 mg/dL). This result suggests a noteworthy improvement in the patient's total cholesterol level with use of the phytosterol and soy protein functional food program.

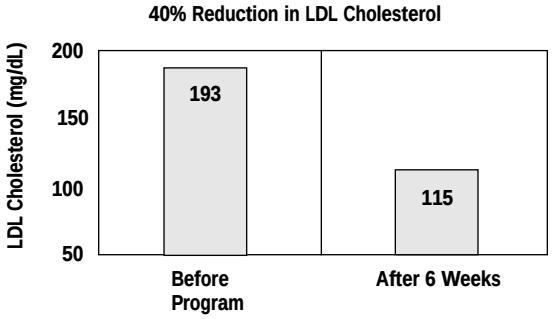

Figure 3. The patient's LDL cholesterol decreased from 193 mg/dL to 115 mg/dL (reference range: < 130 mg/dL) after 6 weeks. The result suggests a considerable decrease in LDL cholesterol with implementation of the phytosterol and soy protein functional food program.

SUMMARY

This case study shows that a targeted nutritional support program that includes a phytosterol and soy protein functional food, low-GI dietary plan, and regular exercise may be beneficial to patients with elevated blood lipids.

NOTE

The information provided in this case study describes the results of one patient under the care of a licensed healthcare practitioner and may not be a typical response. The phytosterol and soy protein functional food program discussed in this study is to be used under the supervision of a physician or other licensed healthcare practitioner.

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[†]Body Mass Index (BMI) is computed by the weight (kg) divided by the square of the height (m).

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