CLINICAL VIGNETTE

A Physician's Challenge in Treating Patient with Severe Hypertriglyceridemia

Nancy Tsoi, M.D., and Tiffany Sheh, M.D.

Case Presentation

Patient is a 49-year-old Caucasian male with multiple chronic conditions including uncontrolled type 2 diabetes, hyperlipidemia, severe hypertriglyceridemia, hypertension, obstructive sleep apnea, morbid obesity, depression, hypogonadism, and chronic leg pain from a motorcycle accident complicated by MRSA infection. After thirteen failed surgeries, he is on permanent disability and enrolled in Pain Management program. He has a history of alcohol abuse and is 10 years sober. He has had multiple hospital admissions for acute pancreatitis, each time with triglycerides reaching over 5000 mg/dl. He is noncompliant with medications, which include the following: lispro insulin, glargine insulin, canagliflozin, atorvastatin, ezetimibe, fenofibrate, Omega-3 acid ethyl esters, citalopram, pregabalin, methadone, and oxycodone.

He had previously seen multiple specialists including endocrinologists, gastroenterologists, cardiologists, and all ended with poor follow-ups. CPAP was prescribed by pulmonologist, but his machine was taken back by vendor due to lack of use during the first 90-days trial period.

The most recent hospital admission was the third episode of acute pancreatitis with triglycerides over 5000 mg/dl. He was discharged after the abdominal pain improved and triglyceride level decreased to 1600 mg/dl. Outpatient follow-up with endocrinologist, gastroenterologist pancreatic specialist, and his primary care physician were arranged.

Physical Exam

On exam, he was a well-developed, well-nourished male with central obesity, mild manner, and soft spoken. Vital signs BP 145/82, Pulse 85, Weight 263 Height 6', BMI 36.78. Significant findings were mildly tender abdomen, no guarding or rebound, extensive posts-surgical wounds of the left lower extremity.

Laboratory Data

After hospital discharge, Blood glucose 339, Hg A1c 13%, Total cholesterol 382, HDL 40, triglycerides 1300 mg/dl, TSH 3.0.

Treatment

Multiple specialists were consulted and recommended that he discontinue all oral diabetic agents with aggressive diabetes control with insulin, checking blood glucose three times a day. He continued statin, fenofibrate, and Omega-3 Fatty Acids, continued to refrain from alcohol, and weight reduction. Plant-based diet was recommended to manage severe hypertriglyceridemia and morbid obesity.

Within three months after the hospital discharge, patient stopped Omega-3 prescription due to higher copay than his other prescriptions, pharmacist alerted the primary care physician that his insulin refill was irregular with delayed pickup, and patient admitted abandoning plant-based diet after one month.

Discussion

It is believed that this patient is suffering recurrent hypertriglyceridemia-induced pancreatitis, contrary to his previous episodes of acute pancreatitis in his 30s, which were likely alcohol-induced pancreatitis with combination of high triglycerides. In regards to the most recent three episodes in past twelve months, in the absence of alcohol, high triglycerides are the culprit. Chronic scarring from the previous pancreatitis likely further contributed to his present uncontrolled diabetes.

Lifestyle modification can make a significant impact in lowering triglycerides, which includes limited alcohol consumption,[1] regular exercise, and Omega-3 Fatty Acids supplement.[2] The standard recommendations for mild to moderately elevated triglycerides are to reduce carbohydrate intake, particularly sugars, and encourage eating low-glycemic index foods, weight loss on obese patients, and tight glycemic control in diabetics. However, for patients who present with extremely high triglyceride levels, acquired or inherited, more exercise, adding omega-3 fatty acids, weight management and eating low glycemic food have not shown to make a significant difference in triglycerides.[3] Gastric Bypass was not recommended for this patient due to his poor compliance and previous MRSA complications. Plant-based diet was recommended by multiple consultants, but patient was only motived during the hospital stay; shortly after discharge, by the second follow-up visit 2 months later, he had abandoned the diet plan and self-decided which prescriptions he would continue based on the cost of medication copay.

After 3 hospital admissions and multiple counseling sessions, this patient failed almost all his follow-up visits with specialists with the exception of following up with his primary care physician for various medical needs. The recommendations

remain unchanged and back to basics: continue to refrain from alcohol, eat less sugars, take insulin, ACEI, statin, fenofibrate, Omega-3, and one aspirin a day.

Conclusion

Patients with extreme hypertriglyceridemia face many personal and physical challenges. These challenges require constant monitoring, guidance and follow through with their physicians. The patient's commitment is necessary to achieve successful outcome. As a primary care physician, we thrive to build a trusting partnership with our patients to help them live longer, healthier and perhaps even happier lives because they feel better. This requires a two-way commitment from patient's own sense of responsibility and the physician's unwavering support.

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