



A Case of very Severe Hypertriglyceridemia during Pregnancy

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Abstract

Severe hypertriglyceridemia is defined as serum triglyceride levels of 1000 mg/dL and more. Acute pancreatitis and fetal losses can be observed in association with severely high triglyceride levels during pregnancy. Here we report the management of a 28-year-old pregnant woman with very severe HTG with the data in the literature.

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Introduction

Hypertriglyceridemia (HTG) is defined as serum triglyceride levels of 150 mg/dL or more.¹ According to the Endocrine Society guidelines, serum triglyceride levels between 1000-1999 mg/dL are categorized as severe HTG and over 2000 as very severe HTG. In a recent analysis, more than 25% of all US adults (56.9 million individuals) have triglyceride (TG) levels \geq 150 mg/dL.² The risk of developing acute pancreatitis at TG levels above 2000 mg/dL is approximately 10-20%.³ During pregnancy, triglyceride and total cholesterol levels increase physiologically with the effect of estrogen.⁴ Acute pancreatitis and fetal losses can be observed in association with severe triglyceride

levels during pregnancy.⁵ In this case, we evaluated the management of a pregnant patient with very severe HTG with the data in the literature.

Case Report

A 28-year-old female patient with a history of acute pancreatitis due to hypertriglyceridemia was admitted to our clinic at 18th week of her second pregnancy. She had hypertriglyceridemia-induced acute pancreatitis during her first pregnancy 2 years ago. She was treated with therapeutic apheresis to achieve a safe TG level for preventing the complications of acute pancreatitis. She subsequently delivered a baby with agenesis of the corpus callosum by natural



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spontaneous birth. She reported no follow-up after she was discharged. She was referred to our clinic by obstetrics and gynecology department due to high triglyceride levels. Serum lipid profile revealed following findings; TG: 3117 mg/dL; total cholesterol: 337 mg/dL; HDL cholesterol: 35 mg/dL. Her amylase and lipase levels were within normal limits. On examination, she had no signs and symptoms, blood pressure: 120/70 mmHg and pulse rate: 98/min, regular. Medical nutrition therapy, omega-3 supplementation at 1000 mg daily, and intravenous regular insulin infusion (0.05 IU/kg/h) were started. She was discharged at the third day with triglyceride concentration of 669 mg/dL and total cholesterol of 227 mg/dL.

Discussion

During pregnancy, VLDL and TG levels increase physiologically 2-3 times of nonpregnant levels. Hyperlipidemia is the most common cause of patients diagnosed with acute pancreatitis after gallstones and alcohol and is seen in 1-14% of cases.⁶ The risk of preeclampsia, pancreatitis, hyperviscosity syndrome, preterm delivery and fetal death increases when TG levels greater than 2000 mg/dL.⁷ Therefore, treatment should be started immediately. In the treatment, besides dietary regulation and lifestyle changes, intravenous insulin, omega-3 support, plasmapheresis and other medical treatments are used.⁸ Inhibition of lipolysis in adipose tissue, a decrease in circulating free fatty acid levels and lipoprotein lipase activation may reduce serum TG levels by using insulin therapy. However, the guidelines do not recommend insulin infusion therapy in cases of severe hypertriglyceridemia without diabetes. They recommend the therapeutic apheresis approach in very severe HTG cases that do not respond to pharmacological treatments.⁹ With the appropriate and timely multidisciplinary

treatment approach, the risk of developing complications can be reduced..

Conflict of Interests

Authors declare that there are none.

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