



Unusual Pregnancy-Induced Hypertriglyceridemia: A Case Report

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Objectives:

To present a rare case of severe hypertriglyceridemia diagnosed during pregnancy, discuss management challenges, highlight the importance of follow-up, delivery planning, and explore potential complications.

Discussion:

Pregnancy significantly alters lipid metabolism, increasing the risk of severe hypertriglyceridemia in patients with risk factors such as insulin resistance or familial hyperlipidemia. Severe hypertriglyceridemia during pregnancy may cause acute pancreatitis (1), preeclampsia (2), or hyperviscosity syndrome, large for gestational age , gestational DM (3) ,posing risks to the mother and fetus. Multidisciplinary management, including plasmapheresis, lipid-lowering agents, and timely delivery, is critical. Prompt diagnosis and intervention mitigate complications, improve outcomes, and prevent maternal and neonatal morbidity.

• Case Report:

- A 39-year-old woman with hypothyroidism, high BMI, and polycystic ovary syndrome presented at 30 weeks of gestation with severe hypertriglyceridemia (triglyceride levels exceeding 1,000 mg/dL) incidentally diagnosed. She had no reported family history of hyperlipidemia. The patient conceived via intracytoplasmic sperm injection (ICSI) with a frozen embryo transfer after 13 years of infertility due to male factor and ovulatory dysfunction, following 14 failed ICSI cycles.

- She was admitted to the medical ward and underwent four sessions of plasmapheresis after failing to respond to insulin therapy and omega-3 fatty acids. Plasmapheresis resolved the elevated triglycerides, but the patient developed sepsis due to infection at the intravenous plasmapheresis port site. The port was removed, and intravenous antibiotics were initiated.

At 32+2 weeks, an elective cesarean section was performed due to premature rupture of membranes with meconium-stained liquor and the patient's medical condition. A live male infant weighing 2,000 g was delivered and admitted to the NICU. The infant was discharged in good condition after 20 days.

Five days postpartum, the patient developed a lower limb rash and shortness of breath. Pulmonary embolism was diagnosed, and she was treated with enoxaparin and bezafibrate. Extensive evaluations excluded infective endocarditis, valve vegetations, and autoimmune disorders. Her lipid profile normalized, and she was discharged in satisfactory condition.

Conclusion:

Severe gestational hypertriglyceridemia requires immediate treatment and a multidisciplinary approach to minimize complications such as pancreatitis, preterm labor, and maternal or fetal mortality. Tailored management and early diagnosis can significantly improve outcomes in high-risk pregnancies.

References:

1)Acute pancreatitis in pregnancy: a 10-year, multi-center, retrospective study in Beijing. *BMC Pregnancy Childbirth* 2022; 2) Pre-eclampsia is associated with, and preceded by, hypertriglyceridaemia: a meta-analysis. *BJOG* 20133) Association of maternal lipid profile and gestational diabetes mellitus: a systematic review and meta-analysis of 292 studies and 97,880 women. *EClinicalMedicine* 2021