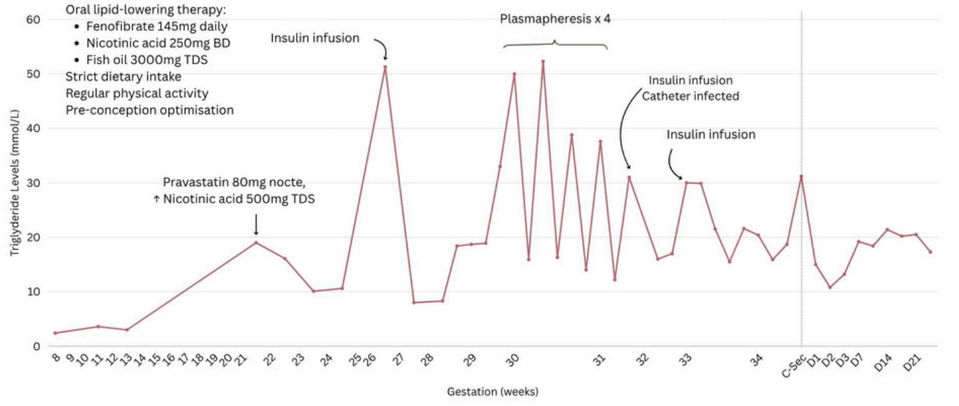
Severe Hypertriglyceridemia Requiring Plasmapheresis in Pregnancy: A Case Report

HS Koh, SL Khong, I-L Lee
Obstetrics and Gynaecology, Joan Kirner Women's and Children's Hospital, Western Health, VIC

Background

Severe gestational hypertriglyceridaemia (HTG) is an uncommon but potentially life-threatening condition associated with acute pancreatitis, hypertensive disorders and preterm birth.

Physiological triglyceride levels rise from the second trimester and peak in the third, often reaching two- to three-fold above non-pregnant levels, exacerbating underlying genetic dyslipidaemia. Management is limited by sparse pregnancy-specific evidence.



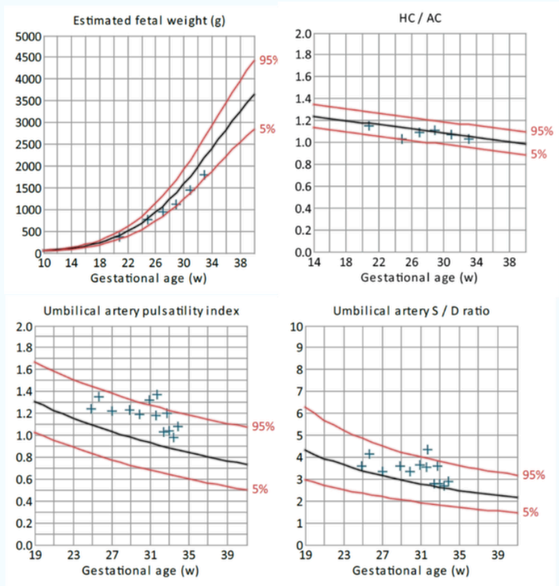
Results

A healthy female infant (1840g) was delivered via uncomplicated elective caesarean section, APGAR 9/9, and required a short nursery admission. Maternal recovery was uneventful.

Case

A 34-year-old Vietnamese woman with GPIHBP1-related familial hypertriglyceridaemia underwent a planned second pregnancy. Her first pregnancy was complicated by refractory HTG (peak 70 mmol/L) and methicillin-sensitive Staphylococcus aureus bacteraemia with tricuspid valve endocarditis following central venous access for plasmapheresis. Preconception counselling, optimisation of lipid-lowering therapy and strict dietary modication were undertaken.

Despite these, triglycerides rose to 19mmol/L at 21 weeks and 52 mmol/L at 26 weeks, requiring admission for insulin–dextrose infusion. Ongoing refractory HTG necessitated plasmapheresis, achieving rapid but transient reduction, complicated by catheter-related infection requiring removal at 31 weeks. Persistent difficulty maintaining safe triglyceride levels, alongside fetal growth restriction and abnormal umbilical artery Dopplers, prompted planned delivery at 34 weeks.



Discussion

Severe HTG in pregnancy confers substantial maternal–fetal risk. Early multidisciplinary care, preconception optimisation and individualised management are critical.

Plasmapheresis may be considered in refractory cases; however, procedural risks and transient efficacy necessitate careful counselling and shared decision-making.

Western Health

RANZCOG Regional SYMPOSIUM 2026 Swan Valley