Severe hypertriglyceridemia in pregnancy

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Clinical image description

R31 year old female presented with abdominal pain and respiratory distress in the third trimester of her second pregnancy. Her blood workup revealed a lipemic sample (Figure 1A) due to markedly elevated serum triglycerides of 8178 mg/dl (Glycerol Phosphate Oxidase method). Total cholesterol and Low Density Lipoprotein were elevated at 1701 mg/dl and 788 mg/dl respectively. There was no family history of lipid disorders. Diagnosis was consistent with gestational hypertriglyceridemia with acute pancreatitis (Serum Amylase-50 U/L, Serum Lipase- 96 U/L), though genetic tests to rule out pre-existing primary hypertriglyceridemia was not feasible. In view of the life threatening condition, she was initiated on Insulin-Dextrose infusion and offered one session of Plasma Exchange. Figures 1B and 1C depict membrane plasma separation with the obtained effluent as lipemic plasma. Her serum triglycerides showed a declining trend and was discharged in good health (serum triglycerides at discharge-651 mg/dl).

Figure 1: Figure A. Lipemic blood sample during routine workup.  
Figure B. Membrane Plasma Exchange showing lipemic plasma in plasma filter.  
Figure C. Lipemic plasma collected as effluent after plasma exchange.