

# Successful outcome of pregnancy in a patient with chylomicronemia treated with therapeutic plasma exchange

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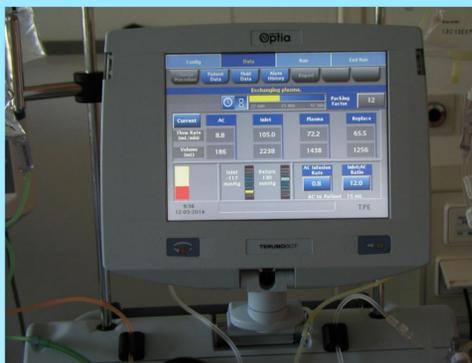
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## Introduction

**Familial chylomicronemia (FC)** is autosomal recessive disorder caused by lipoprotein lipase deficiency (LPL) and associated with markedly elevated triglyceride (TG) levels that may result in pancreatitis. Pregnancy itself is associated with increase in serum TG, thus patients with LPL deficiency may experience disease exacerbation with development of eruptive xantoma, pancreatitis and even intrauterine fetal death.

## CASE REPORT

A 30-year-old female was diagnosed with FC at the age of one month and was intolerant to fibrates. She had already experienced 3 episodes of pancreatitis and one miscarriage. When seen at week 22 of her second pregnancy on very low fat diet, plasma TG was **32,14 mmol/L**.



- We used the device for centrifugal apheresis therapy **Spectra Optia® Apheresis System** (Terumo BCT, USA), peripheral vascular access (vein-vein) with an average flow velocity of 100 mL/min, and 5% albumin as a replacement fluid.
- Apheresis procedure exchanged about 4500 mL of plasma, lasted around 80 min.
- Regional citrate anticoagulation has been done.



Week of pregnancy	Tgl before apheresis (mmol/l)	Tgl after apheresis (mmol/l)	Volume of plasma exchange
22	32,14	13,47	3500 ml
23	18,6	5,33	3500 ml
25	21,88	6,85	4000 ml
28	24,03	7,26	4000 ml
32	25,35	6,93	4500 ml
39	28,27	14,68	4500 ml

- After 41 TPE treatments, she gave birth to a healthy boy (3640 g, 49 cm) in the 40th week of pregnancy.



**Centrifugal therapeutic plasma exchange (TPE)** was started. Vascular access was via peripheral veins.



## Conclusion

- A successful full term pregnancy outcome was achieved in our patient with FC, with TPE being very helpful in reducing TG levels
- **Nurses** play a significant role in successful plasmapheresis treatment management, vascular access guarding and patient education which is crucial for achieving therapeutic goals and optimal outcomes