Severe Hypertriglyceridemia and Pancreatitis

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A mid 40-year-old woman was admitted to hospital ICU for severe pancreatitis. She did not drink any alcohol or have any gall stones. I was consulted for the case. I ordered several labs to rule out unusual causes of severe pancreatitis such as autoimmune pancreatitis, hereditary pancreatitis, hypercalcemia or hypertriglyceridemia or medication-induced pancreatitis.

To my surprise, her blood fatty acid (triglyceride) level was more than 5000. The lab technician said her blood looked just like milk. Further discussion with the patient revealed that she stopped taking anti-hyperlipidemic medication for almost one year because she was not able to keep the appointments with her primary care physician and therefore not able to obtain medication refill. I told her that her pancreatitis was most likely caused by severe hypertriglyceridemia, a condition in which triglyceride level was elevated. We need to lower her triglyceride, or blood fatty acid, to stop pancreatitis.

Several options are available. Insulin infusion and heparin infusion can be done in community hospital to lower the blood fatty acid but also carry potential complications such as low blood sugar or causing pancreatic bleeding. Plasmapheresis can be done in big university hospital but can be invasive. The patient preferred to stay in local hospital to try medication. Low dose insulin infusion was given with close monitoring for hypoglycemia. Heparin infusion was not tried because of potential pancreatic bleeding. Subcutaneous heparin was given instead. The effect of the treatment was not optimal due to the extremely high level of blood fatty acid. She was transferred to a university hospital to receive plasmapheresis to filter out fatty acid, a process similar to hemodialysis for kidney disease.

She came back to my office for follow-up in one month. Her blood fatty acid was down to 500. I adjusted her anti-lipid medication and followed up with her monthly for 3 months until her blood fatty acid was down below 150. Her blood fatty acid has been controlled below 150 since then for the last two years.

Hypertriglyceridemia is an uncommon cause of pancreatitis. Blood fatty acid more than 1000 is a medical urgency and it is usually associated with 3-5% risk of pancreatitis. The fatty acid should be lowered as soon as possible to prevent the occurrence of pancreatitis. Several therapies are available to lower high blood fatty acids. If you have uncontrollable hypertriglyceridemia, please contact Dr. Jeff Ye, North Atlanta Medical & Digestive Care at 770-346-0900. We can help!