Clinical Images

Hypertriglyceridemia-Induced Pancreatitis

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CASE

A 23-year-old woman with type 1 diabetes mellitus (hemoglobin A1c 12.7 %) presented with severe abdominal pain, hypotension and tachycardia. Blood glucose was 418 mg/dL, lipase was elevated to 1774 units/L and ionized calcium was 3.2 mg/dL. Her abdominal computed tomography (CT) scan demonstrated extensive necrotizing pancreatitis (Fig. 1). Serum triglyceride (TG) level was 4425 mg/dL. A diagnosis of hypertriglyceridemia-induced pancreatitis was made. After aggressive resuscitation, an insulin drip was initiated and she received a single plasmapheresis cycle, with removal of a thick milky ultrafiltrate (Fig. 2). Serum TG level fell to 484 mg/dL and she was discharged.

Hypertriglyceridemia is the third most common cause of acute pancreatitis after ethanol use and gallstones.[1] The etiology should be suspected in obese, diabetic or hyperlipidemic patients. Risk of pancreatitis greatly increases with TG levels > 1000 mg/dL.[2] The presentation and general management is similar to that of other causes of pancreatitis. Specific management strategies consist of plasmapheresis with removal of triglycerides in the ultrafiltrate, with early therapy associated with improved outcomes.[3] Insulin and heparin therapy also reduce serum TG levels in the acute setting by altering lipid metabolism.[3] Long-term oral hypolipidemic therapy and diet control are indicated to prevent recurrence.

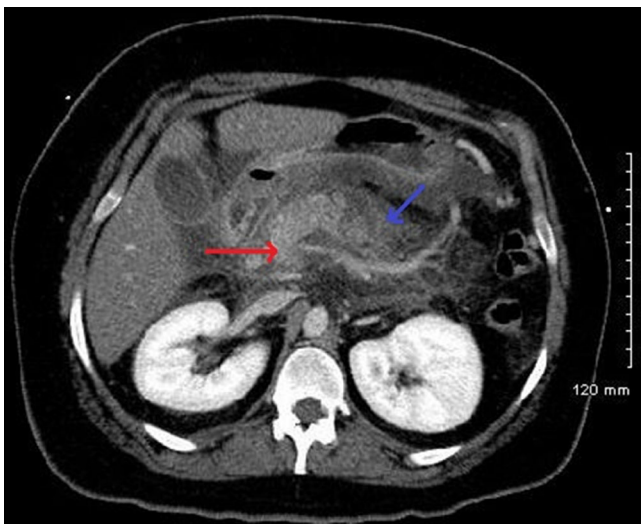

Figure 1 CT of the abdomen demonstrating pancreatitis with patchy necrosis (*red arrow*) and peripancreatic edema and indistinct pancreatic borders (*blue arrow*).

Figure 2 Milky ultrafiltrate obtained after a single cycle of plasmapheresis with drop in serum triglyceride levels from > 4000 mg/dL to < 500 mg/dL.

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