White Serum – A Clue to Diagnosis of Acute Recurrent Pancreatitis

Arghya Samanta¹ • Anshu Srivastava¹ • Sonali Verma² • Moinak Sen Sarma¹ • Ujjal Poddar¹

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To the Editor: Severe hypertriglyceridemia [serum triglyceride (TG) >1000 mg/dl] is a rare cause of acute recurrent pancreatitis (ARP) [1]. We report a case of ARP caused by lipoprotein lipase (LPL) deficiency, successfully treated with insulin infusion.

A 4-y-old girl without any pre-existing systemic disease presented with recurrent episodes of epigastric pain and non-bilious vomiting for the past 6 mo with normalcy between the episodes. There was no history of jaundice, abdominal trauma, or drug intake. There was no history of consanguinity, dyslipidemia or pancreatitis in the family. On admission, she had tachycardia with otherwise unremarkable physical examination. Blood sampling showed white colored serum, with markedly elevated TG (2451 mg/dl) and total cholesterol of 343 mg/dl. Serum amylase and lipase were > 3 times of normal. Computed tomography of the abdomen showed bulky head of pancreas, 2 small intra-parenchymal fluid collections without changes of fatty liver or chronic pancreatitis. Lipid profile of parents was normal. The child was kept nil orally, given analgesics and insulin infusion (regular at 0.1 U/kg/h) along with dextrose infusion. The serum TG reduced to 330 mg/dl after 72 h with complete resolution of pain. Child was started on a low fat diet (10–15% of total calories from fat and medium chain triglycerides being the main fat source) and insulin was stopped. However, epigastric pain recurred with increase in TG (1108 mg/dl) on 3rd day of stopping insulin. This settled with a second course of insulin infusion, with disappearance of pain within 24 h and reduction of TG (885 mg/dl at 24 h, 354 mg/dl at 96 h). This time, child was given omega-3 fatty acid, fenofibrate and niacin along with low-fat diet. Genetic testing

by exome sequencing confirmed homozygous c.644G > A (p.Gly215Glu) LPL pathogenic variant [2]. At 4 months follow-up, serum TG was maintained below 400 mg/dl, without recurrence of pancreatitis.

Supportive therapy and prompt reduction of TG is essential for hypertriglyceridemia related pancreatitis. But there are no established guidelines for the same in acute setting. Case reports have successfully used plasmapheresis, heparin or insulin in children [3–5]. Insulin (rapid activator of LPL), along with fasting, leads to rapid decline in TG and helps prevent life-threatening complications. LPL deficiency should be suspected in pancreatitis patients with white colored serum.

Compliance with Ethical Standards

Conflict of Interest None.

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✉ Anshu Srivastava
avaniashu@yahoo.com

¹ Department of Pediatric Gastroenterology, Sanjay Gandhi Postgraduate Institute of Medical Sciences, Lucknow, Uttar Pradesh 226014, India

² Department of Pediatric Endocrinology, Sanjay Gandhi Postgraduate Institute of Medical Sciences, Lucknow, Uttar Pradesh, India