Acute Abdomen after Extravasation of Parenteral Nutrition in a Preterm Neonate

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Clinical Image

A 3 weeks old preterm male infant with gestational age of 29 weeks and birth weight of 1504 gm had necrotizing enterocolitis of modified Bell’s staging IIIB and received emergent laparotomy. Due to prolonged inadequate enteral nutrition and difficult intravenous catheter access, left-side femoral vein cutting down with central venous catheter insertion was performed. Total Parenteral Nutrition (TPN) including lipid infusion was provided through this catheter. Five days later, the patient became hemodynamically unstable and severe abdominal distension with abdominal wall erythema and formation of bullae was observed. Bright whitish fluid was drained from the ruptured abdominal wall bullae (Figure 1A). The drained discharge showed high glucose and triglyceride levels of 6617 mg/dL and 2001 mg/dL, respectively, which was consistent with the contents of TPN. Venogram via the femoral catheter revealed extravasation into the peritoneum (Figure 1B). Femoral catheter was immediately removed and antibiotics were continuously administered with local wound care. The acute abdomen improved rapidly within 48 hours and skin necrosis healed 2 weeks later.

Figure 1: A) Distended, erythematous abdomen with lipid-like whitish discharge from the necrotic skin. B) Venogram via left femoral catheter showed intraperitoneal spill (white arrow).