Superior Mesenteric Artery (SMA) Syndrome in a Scoliosis Patient with Duchenne Muscular Dystrophy

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Introduction: Superior mesenteric artery (SMA) syndrome is an uncommon disease resulting compression of the third portion of the duodenum from SMA. The clinical manifestations include postprandial fullness or pain, nausea, vomiting and anorexia due to duodenal obstruction. Several predisposing factors including acute weight loss, scoliosis, spinal surgery, and other hereditary motor and sensory neuropathy have been reported.

Case: This 16-year-old male was admitted via ER due to nausea and vomiting with abdominal discomfort. He was diagnosed neuromuscular scoliosis Duchenne muscular dystrophy and underwent correction and posterior fusion T3-S1 with iliac screws fixation, auto and allo- bone graft in May 2008. He has been bedridden state from childhood. And he was 165 cm and 26 kg at admission. Recently weight loss occurred 6 kg during six months. He has frequently complained of early satiety and abdominal discomfort with dyspepsia as usual. And this was the second visit for this problem. The abdomen x-ray demonstrated distended stomach with ileus. Abdomen and pelvis CT scans demonstrated that stomach and duodenum up to third portion were dilated severely. However, abnormal findings that caused obstruction were not found.When Levin tube was inserted into the stomach, brownish gastric juice with amount of 2 L was drained. UGI series showed no stenotic lesion or obstruction. Instead the contrast did not pass smoothly at the third portion of the duodenum. Therefore he was diagnosed SMA syndrome and he had a few predisposing factors for SMA syndrome including recent weight loss, scoliosis and the history of spinal surgery. When exploration, there is no stenotic or obstructed lesion in the upper gastrointestinal tract. When the finger was inserted the Treitz ligament, the duodenum was trapped between aorta and SMA and the finger was also trapped and felt tight. Kocher maneuver was performed to make duodenojejunostomy. And it was performed ante-colic fashion. There is no complication and diet was permitted at postoperative 5 day. However, chyle ascites was drained when the diet was built up. The chyle ascites was treated conservatively with 3 days NPO and supplement of medium chain triglyceride.