Gastric dilatation in patient with anorexia nervosa

A 14 years old girl with a diagnosis of Anorexia Nervosa, Restrictive Subtype, presented 2 months after discharge from Eating Disorder care with a severe relapse (BMI 13.88 kg/m2) and 12 hours history of nausea and bilious vomiting not responsive to anti-emetics. An abdominal X-ray showed distension of the stomach with the gastric antrum in the right lower quadrant. A nasogastric tube was placed and 2 litres of bilious fluid drained with minimal improvement post-decompression. A CT scan revealed a grossly distended fluid filled stomach encompassing the majority of the abdomen; the IVC and SMV were also compressed due to mass effect and the diagnosis of a Superior Mesenteric Artery Syndrome (SMA syndrome) was made. She had several attempts of naso-jejunal tube placement under endoscopic/radiological guidance (each time several litres of bilious fluid were drained), but they became displaced within hours. Finally a last attempt of enteral feeding was successful and she was discharged 1.5 months later with a normal X-ray abdomen, tolerating a normal diet and gaining weight. She continues to be under supervision of the Eating Disorder team.

The possibility of SMA syndrome should be considered in patients with anorexia nervosa and signs/symptoms of upper gastrointestinal tract obstruction. This combination of pathologies is uniquely challenging - SMA syndrome can precipitate and exacerbate anorexia nervosa and anorexia nervosa prevents the patient from being able to ingest adequate calories to allow the SMA syndrome to resolve.

Fig. 1: CT image – distended fluid filled stomach
Fig. 2: CT image – distended stomach, dilated first and 2nd part of the duodenum, compression of the IVC and SMV
Fig. 3: Endoscopy image – distended stomach filled with bilious fluid

Abbreviations: IVC – inferior vena cava; SMV – superior mesenteric vein