A 35-year-old woman presented with onset of nausea, bilious vomiting, upper abdominal discomfort and weight loss (body weight 30 kg). The symptoms subsided in the prone position. Physical examination and laboratory tests including complete blood count, electrolytes, liver function tests, and amylase were normal.

The CT scan shows dilatation of the first and second parts of the duodenum. The upper gastrointestinal series shows abrupt cut-off of the barium by vertical compression of the third part of the duodenum with consequent dilatation. MRA shows an acute angle of the superior mesenteric artery (SMA) as it branches from the aorta.

Treatment was initially conservative, and included nasogastric decompression, electrolyte replacement and parenteral high-caloric nutrition. The symptoms did not resolve during the next 2 weeks and she was operated. A side-to-side duodenojejunostomy was performed successfully with division of the ligament of Treitz. The patient

Fig. 1, 2. CT scan of the abdomen shows exaggerated dilatation of the stomach and duodenum with gastric retention.
recovered uneventfully, was discharged on the 8th postoperative day and continues to be in good health (she weighs about 60 kg) 2 years postoperatively.

SMA syndrome has been associated with rapid growth during puberty, marked weight loss, prior abdominal surgery and intra-abdominal inflammatory conditions. Symptoms include postprandial epigastric fullness, bloating, bilious vomiting and abdominal pain that are relieved by placing the patient in a knee-to-chest position. Barium series are diagnostic. Treatment includes nasogastric decompression, intravenous fluids, electrolyte replacement and identifying and reserving the precipitant factors. Surgery is indicated if the conservative treatment fails or in patients with chronic SMA syndrome.

Fig. 3. The upper gastrointestinal tract shows abrupt vertical compression of the 3rd part of the duodenum with consequent dilatation.

Fig. 4. The low aorto-mesenteric angle which is under 38° is evident on MRA.