A 64-year old gentleman was admitted with two months of intractable nausea and vomiting as well as a thirty pound weight loss following replacement of infected spinal hardware. Prior to admission, he had undergone a two-week hospitalization at an outside facility during which computed tomography scan of the abdomen did not reveal any obvious intra-abdominal pathology to explain his symptoms. Since he was unable to tolerate any oral intake, he was discharged on total parenteral therapy.

The patient’s history included duodenal ulcer, resulting in gastric outlet obstruction requiring a Jaboulay gastroduodenostomy in 1974, and T12 thoracic vertebra fracture with post-traumatic kyphosis and multiple spinal surgeries over the course of several years.

At our facility, the patient underwent several abdominal x-rays, a computed tomography scan of the abdomen with intravenous contrast and esophagogastroduodenoscopy, all of which were negative for obstruction or other findings to explain his symptoms. He continued to have significant nausea and vomiting despite normal bowel function and cessation of all opiates. He was unable to tolerate anything by mouth and required nasogastric tube suction to relieve nausea and abdominal discomfort.

Ultimately a small bowel push enteroscopy using a pediatric colonoscope revealed a large pulsatile extrinsic mass with normal overlying mucosa in the third portion of the duodenum (Figure 1). The mass appeared to obstruct the lumen when decompressed, although the scope was able to easily traverse past the lesion. This finding was felt to be consistent with the superior mesenteric artery syndrome.1 The patient subsequently underwent laparoscopic duodenectomy with gastrojejunostomy. Over the next several weeks his oral intake steadily improved without any persistent nausea or vomiting.

Also termed Wilkie’s syndrome or Cast syndrome, superior mesenteric artery syndrome is a rare disorder characterized by compression of the third part of the duodenum by the aorta and the overlying superior mesenteric artery.
mesenteric artery. The most frequently reported causes of this disorder are rapid weight loss, spinal surgery and external increases in abdominal pressure. We hypothesize that alteration in aorto-mesenteric angle due to spinal surgery was responsible for this patient’s symptoms. Superior mesenteric artery syndrome is most frequently diagnosed using radiographic techniques (computed tomography and occasionally ultrasound), although endoscopic ultrasound has been described as a diagnostic tool. In this patient, evaluation of the aorto-mesenteric angle on computed tomography scan was limited by hardware artifact thus complicating timely diagnosis (Figure 2). Our report highlights the diagnostic challenge this disorder can pose.

References