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Epigastric Pain and Weight Loss – A Case of Wilkie's Syndrome

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ABSTRACT

Superior mesenteric artery syndrome (SMA syndrome) or Wilkie's syndrome is a rare etiology of duodenal obstruction due to compression of the third portion of the duodenum between the superior mesenteric artery and the aorta. Physical and laboratory findings are often non-specific but imaging methods are useful for diagnosing the condition. A 46-year-old female patient presented to the outpatient clinic of our internal medicine department with a 2-year history of epigastric pain, nausea, early satiety and weight loss of 15 kg. Previous studies were inconclusive. The patient underwent computed tomography enterography and its findings were consistent with SMA syndrome. Currently the patient is being followed by General Surgery and Nutrition and is under nutritional measures in order to optimize her body mass index to decrease possible surgical complications.This case report emphasizes the importance of clinical suspicion and careful investigation when considering less common etiologies for frequent gastrointestinal symptoms.

LEARNING POINTS

- Superior mesenteric artery syndrome is a rare cause of upper gastrointestinal system obstruction and its diagnosis is often delayed.
- This syndrome should be suspected in the differential diagnosis of patients with persistent nausea, abdominal pain and significant weight loss.

KEYWORDS

Wilkie's syndrome, superior mesenteric artery syndrome, duodenal obstruction

CASE DESCRIPTION

A 46-year-old female patient presented to the outpatient clinic of our internal medicine department with a 2-year history of epigastric pain, nausea, early satiety and weight loss of 15 kg. Postprandial pain was also noted. On examination, the patient was emaciated, had epigastric fullness and weighed 45 kg.

The patient had been previously evaluated by gastroenterology, general surgery and psychiatry, who had conducted an exhaustive study but with inconclusive results. Upper endoscopy and colonoscopy had showed esophagitis, which had persisted following treatment. An abdominal computed tomography (CT) scan had been inconclusive. Laboratory analysis had been unremarkable. The symptoms were attributed to an anxiety disorder and the patient was prescribed antidepressants, with no clinical improvement.

After consultation in our department, the patient underwent CT enterography, which revealed distension of the proximal duodenum and compression of the third portion of the duodenum between the aorta and the superior mesentery artery (aortomesenteric clamp), with a measured aortomesenteric distance of 5 mm (*Fig. 1*) and an angle of 18.6° (*Fig. 2*). These findings were consistent with superior mesenteric artery syndrome (SMA syndrome), also known as Wilkie's syndrome.

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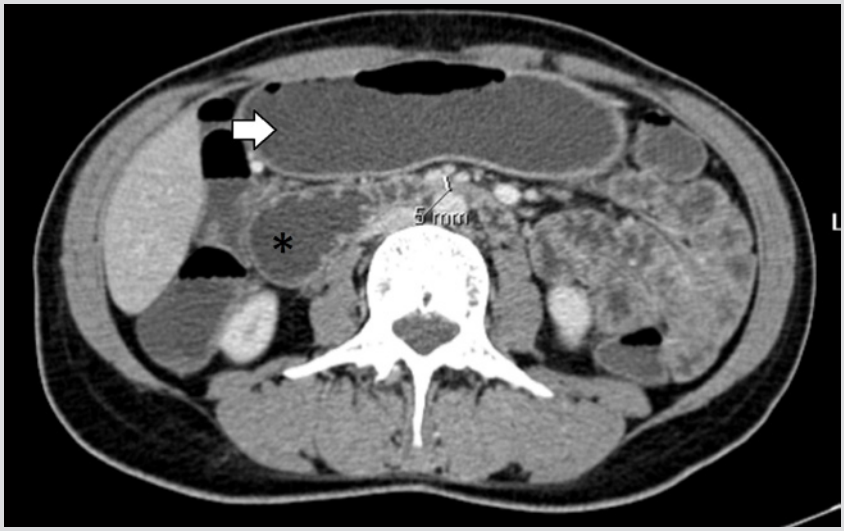

Figure 1. Axial CT enterography scan showing compression of the third part of the duodenum between the aorta and the SMA (aorta–SMA distance of 5 mm), with consequent upstream dilation – a markedly distended stomach (white arrow) and duodenum (black asterisk)

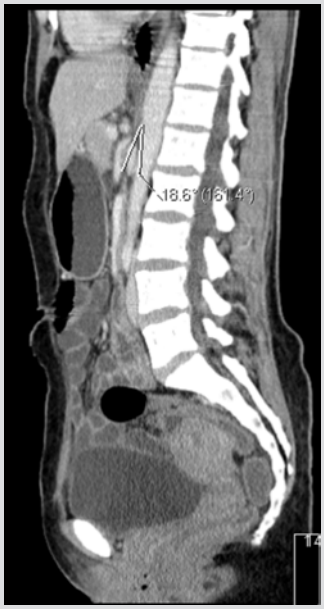

Figure 2. Sagittal CT enterography scan showing a narrow aorta–SMA angle of 18.6°

DISCUSSION

SMA syndrome is a rare etiology of duodenal obstruction due to compression of the third portion of the duodenum between the SMA and the aorta. The incidence ranges between 0.013 and 0.3%[1, 2]. In humans, the aorta–SMA angle ranges from 38° to 65° due to erect posture. The main anatomical feature of SMA syndrome is the narrowing of the aorta–SMA angle to <25° and, consequently, a decrease in the aortomesenteric distance to <10 mm (usually ranging from 10 to 28 mm)[1, 3].

Physical examination and laboratory findings are usually non-specific. Symptoms include nausea, vomiting, epigastric pain, postprandial discomfort, bloating and weight loss. Nevertheless, many imaging methods are useful for diagnosing the condition.

A high clinical suspicion is of the utmost importance, particularly in patients with severe weight loss and symptoms of gastric distension, whose initial studies were inconclusive[3–5]. The management of SMA syndrome is individualized; the physician may adopt a conservative treatment (with nutritional support) or manage it invasively with surgery[3–5].

We present a case of SMA syndrome in a middle-aged female patient with characteristic symptoms of duodenal obstruction but whose diagnosis was delayed. This led to multiple consultations and poor quality of life until the final diagnosis was made. Our case report presents a rare condition and emphasizes the importance of clinical suspicion and careful investigation when considering less common etiologies for frequent gastrointestinal symptoms. Early diagnosis is important for improving symptoms and preventing complications.

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