Superior Mesenteric Artery Syndrome: A Case Report

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Superior mesenteric artery (SMA) syndrome is an uncommon cause of proximal intestinal obstruction. Obstruction results from the vascular compression of the third portion of the duodenum between the aorta and the SMA. We describe a case of SMA syndrome in a 21-year-old female who presented at our emergency department with a 2-day history of nausea, vomiting, and abdominal pain. The diagnosis was established by abdominal KUB and computed tomography. She received conservative medical treatment, which resulted in a good outcome.

Key words: superior mesenteric artery syndrome, proximal intestinal obstruction, abdominal pain

Introduction

Superior mesenteric artery (SMA) syndrome is relatively rare etiology of upper intestinal obstruction. It results from vascular compression of the third portion of the duodenum between the aorta and the SMA (1). The result is chronic, intermittent or acute obstruction of the duodenum, which may be either complete or partial (2,3). We present a case of SMA syndrome in a 21-year-old female who presented at our emergency department with a 2-day history of nausea, postprandial vomiting, and abdominal pain.

Case Report

A 21-year-old female presented at our emergency department (ED) with a 2-day history of nausea, postprandial vomiting, and abdominal pain. The patient looked ill and was dehydrated. She denied having any significant medical history, having an abnormal eating disorder or having ever undergone abdominal surgery. On arrival at the ED, her blood pressure was 110/68 mmHg, with a heart rate of 92 beats per minute and respiratory rate of 18 breaths per minute. Physical examination revealed abdominal distension, and right upper quadrant abdominal tenderness but without the peritoneal sign. Her symptoms became aggravated after meals and were relieved by lying in the prone position and/or in a knee-chest position. Her biochemical profile, coagulation function, and platelet count were within the reference range except for prerenal azotemia. An abdominal KUB radiograph (Fig. 1A) showed gaseous distension of the stomach and duodenum. Subsequent computed tomography (CT) of the abdomen (Fig. 1B and C) revealed compression of the third portion of the duodenum between the aorta and the SMA, which had created mild distension of the stomach. The patient was admitted to the medical ward and treated with nothing per mouth together with fluid and electrolyte replacement as well as by administration of prokinetic agents and by nasogastric tube drainage. On the next day, her condition was found to have gradually improved...