

Assessment of Two Cases with Wandering Spleen

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Abstract

Wandering spleen is a condition in which the spleen migrates to another position in the abdomen different from its normal location. In this study, we present two different cases of wandering spleen admitted in Loghman Hakim government hospital in Tehran, Iran. The cases included a 5-year-old girl with wandering spleen and complication of torsion and infarction of spleen and a 24-year-old man with wandering spleen and intestinal malrotation. The three entities, wandering spleen, gastric volvulus, and intestinal malrotation are not common and can occur independently, but share a common etiology as congenital anomalous intraperitoneal visceral attachment originated from the dorsal mesentery. Wandering spleen may cause abdominal pain and then become complicated by torsion and infarct.

Keywords: Wandering Spleen, Spleen, Abdomen.

Introduction

Wandering spleen is a condition in which the spleen migrates to another position in the abdomen different from its normal location¹. The reason for the migration of the spleen to an unusual location is the absence of ligaments, which fix the spleen²⁻⁴. The incidence of wandering spleen is reported as 0.5%¹.

The wandering spleen may be either congenital or acquired, it may also be secondary to trauma or splenomegaly. Diagnostic modalities of choice are abdominal ultrasonography and computed tomography⁵.

Case Presentation

In this study, we present two different cases of wandering spleen admitted to Loghman Hakim governmental hospital in Tehran, Iran, the first case in December 2016 and the second case in February 2017. The cases included a 5-year-old girl with a wandering spleen and complications of torsion and infarction of the spleen and a 24-year-old man with a wandering spleen and intestinal malrotation.

First Case

A 5-year-old girl presented in the emergency department complaining of severe abdominal pain predominantly in the left upper quadrant, nausea, and vomiting. According to claims by her parents, she had episodes of pain for the past few days but became more severe over the past two days. After the initial workup, she had leukocytosis (WBC= 17200 MCL) and thrombocytosis (PLT=965000 MCL). The patient was admitted and during her admission, she had a low-grade fever and severe left upper quadrant pain. Intravenous Ceftriaxone and Metronidazole were started for her. After one day, she became afebrile. During the admission time, she underwent Spiral contrast-enhanced computed tomography (CECT) of the Abdomen and pelvis, which showed non-enhanced and wandering spleen along with splenomegaly (Long Axis=137mm) compatible with wandering spleen infarction. Thereafter, the patient underwent laparoscopic splenectomy. At discharge time, she had a white blood cell count of 11000 MCL and a platelet count of 132200 MCL (Fig. 1).

Second Case

The second case was a 24-year-old man referred to the outpatient department complaining of chronic and occasional episodes of abdominal pain. Accordingly, the CECT of the abdomen and pelvis showed the spleen as ectopic in the right midline abdominal cavity associated with intestinal malrotation. The duodenojejunal junction was found at the right side of the abdominal midline, and SMV was left lateral to

SMA. Relative dilatation of small intestinal loops was seen, as well. Diffuse fecal material was seen in the colon. As the patient had no acute symptoms, elective splenectomy was recommended. This patient had two entities of intestinal malrotation and wandering spleen secondary to congenital anomalous intraperitoneal visceral attachment originating from the dorsal mesentery (Fig. 2 and 3).

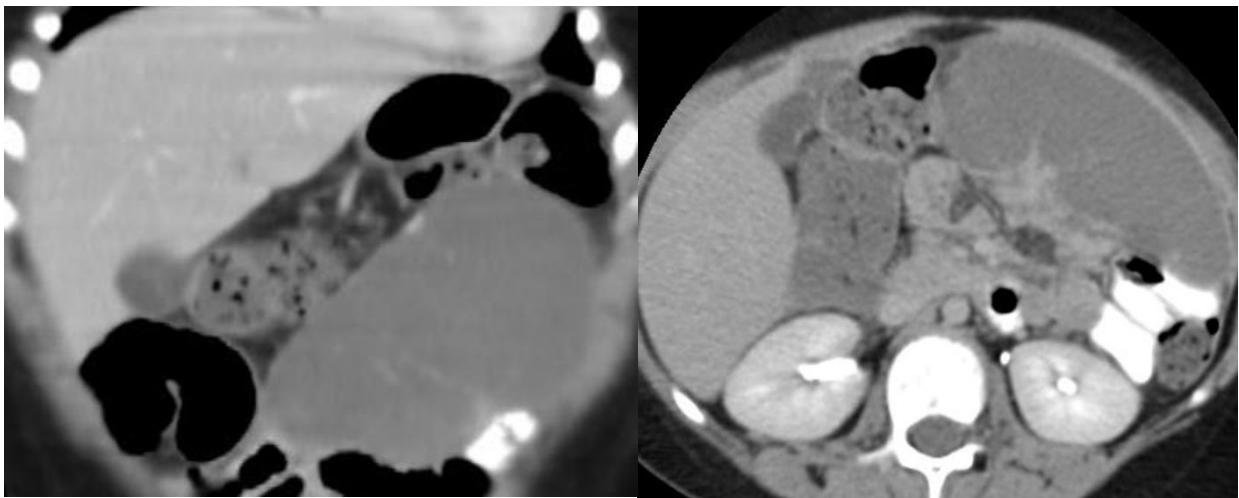


Figure 1 (first case): Axial and Coronal abdominal Ct scan with IV and oral contrast Delayed phase, the spleen are located under normal position without any enhancement, and engorgement of splenic vessels in its hilum secondary to torsion of the spleen is seen.



Figure 2 (second case): Axial and Coronal abdominal CT scan with Iv and oral contrast, wandering spleen is located underneath of liver and shows a normal enhancement.

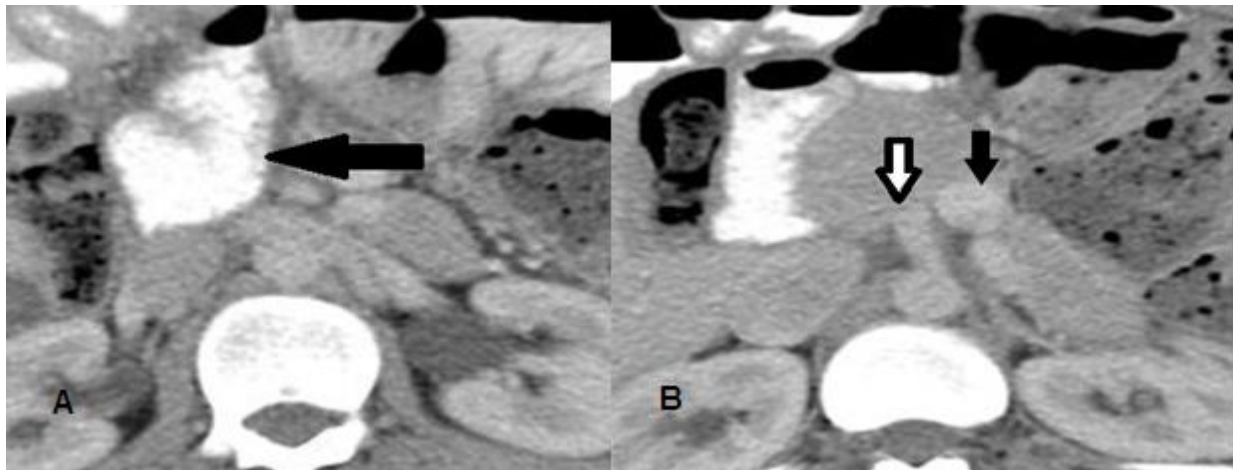


Figure 3 (the second case) : (A) superior mesenteric vein (black arrow) is located left lateral of superior mesenteric artery (white arrow). (B) Duodenojejunal junction located in right side of vertebral (black arrow), both findings are the clues for intestinal malrotation.

Discussion

Wandering spleen is a rare condition caused either by abnormal laxity or the absence of ligaments that keeps the spleen in its normal anatomic position and does not let the spleen move from its normal position⁶. Wandering spleen is not so common with an incidence of <2% and comprises less than 0.5% of splenectomies. In children, the congenital reason for the development of wandering spleen is mal-development of the fixating ligaments that results in the long splenic vascular pedicle and mobile spleen^{7, 8}. Clinical diagnosis is difficult because the wandering spleen has no specific symptom until spleen torsion occurs and the patient presents with acute abdomen⁹. Wandering spleen is usually diagnosed in women aged between 20 and 40 years old and in children¹⁰. One of our cases was an adult male who was a rare case. Non-operative treatment of the wandering spleen is associated with a complication rate of 65%, so the gold standard is a surgical intervention¹¹. One of the complications of wandering spleen is spleen torsion, mostly clockwise. With the progression of torsion, arterial supply is compromised, which may lead to infarction, fibrosis, and necrosis¹². The three entities, wandering spleen, gastric volvulus, and intestinal malrotation are not common and can occur independently, but share a common etiology as congenital anomalous intraperitoneal visceral attachment originated from the dorsal mesentery. Amongst the three entities, malrotation complication is not common because it

involves a primitive stage of dorsal mesenteric development¹³. Radiological modalities are commonly used for the diagnosis of wandering spleen, including plain film radiography, grayscale ultrasound, Doppler sonography, and CT scan or MRI of the abdomen⁷

Conclusion

The three entities, wandering spleen, gastric volvulus, and intestinal malrotation are not common and can occur independently, but share a common etiology as congenital anomalous intraperitoneal visceral attachment originated from the dorsal mesentery. Wandering spleen may cause abdominal pain and then become complicated by torsion and infarct.

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None.

Authors' contributions

Concept and idea: Mersad Mehrnahad; Data gathering: Mohamad Mosahar Mehrnahad, Mersad Mehrnahad; Preparing the manuscript: Mohamad Mosahar Mehrnahad1, Mersad Mehrnahad.

Conflict of interest

We declare that there is not conflict of interest.

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Ethical consideration

Not applicable.

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