Wandering Spleen: Three Subsequent Cases in Young Women

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KEY WORDS: acute abdomen, congenital dyserythropoietic anemia, wandering spleen

IMAJ 2018; 20: 656–657

Wandering spleen is an infrequent condition in which the spleen migrates out of its anatomic location due to congenital or acquired laxity of the splenic ligaments. It is estimated to be the indication for splenectomy in 0.25% of all splenectomies. Only about 500 cases have been reported in the literature. Nevertheless, this diagnosis is rarely considered at the onset of acute or chronic abdominal pain. In this report, we report three consecutive cases of female young adults who presented with wandering spleen in our medical center over a 6 month period.

PATIENT DESCRIPTION

PATIENT 1

A 26 year old woman with history of congenital dyserythropoietic anemia and surgical history of cholecystectomy presented 4 months after cesarean section with acute abdomen. She had experienced periumbilical diffuse pain for 4 days in addition to a low grade fever. At arrival to the emergency department (ED) she was tachycardic with normal blood pressure. Fullness below the umbilicus and diffuse tenderness were noted on physical examination. A computed tomography (CT) scan showed displaced and enlarged (13 cm × 16 cm) spleen with a swirl sign of blood vessels and ischemic areas [Figure 1A].

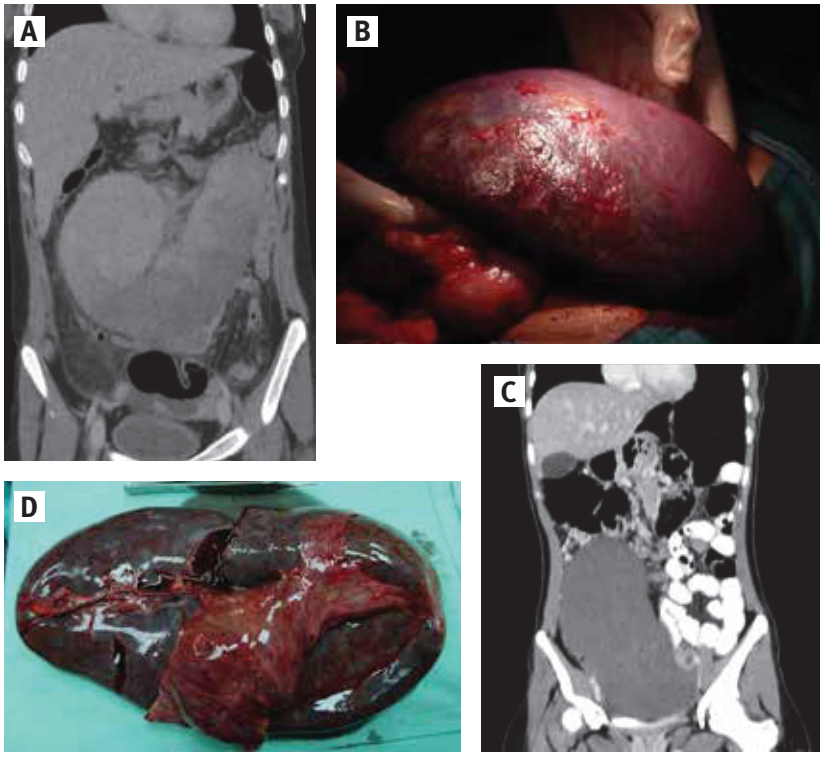
The patient was taken immediately for emergency surgery. During an explorative laparotomy, a displaced, enlarged, and ischemic spleen was observed and hence a decision was made to resect it [Figure 1B]. The patient had a benign postoperative course and was discharged 4 days later.

PATIENT 2

A 27 year old generally healthy, nulliparous woman had experienced acute lower abdominal pain for 2 days. At arrival to the ED, the patient had normal vital signs. Hypogastric tenderness was noted during a physical examination. To rule out acute appendicitis, an abdominal CT scan was conducted. The scan showed a huge (22 cm × 10 cm) ischemic spleen located in her right pelvis, accompanied with splenic vein thrombosis [Figure 1C]. The patient was taken immediately for surgery.

The procedure began as laparoscopy. A huge spleen was located in the pelvis and a translocated tail of pancreas was noted.

Figure 1. Computed tomography (CT) scans and macroscopic appearances of spleen. A computed tomography (CT) scan of spleen of Patient 1 **[A]**, macroscopic appearance of spleen of Patient 1 **[B]**, computed tomography (CT) scan of spleen of Patient 2 **[C]**, macroscopic appearance of spleen of Patient 2 **[D]**



Safe laparoscopic manipulation of the spleen was not possible; hence, the surgery was converted to an open procedure and splenectomy was completed [Figure 1D]. On postoperative day 3 the patient had a fever with general abdominal tenderness. To exclude a surgical complication, a CT scan was performed with no significant findings. The patient was further supported with fluids and antipyretics and was discharged 6 days later.

PATIENT 3

A 27 year old female with mental retardation, chronic thrombocytopenia, known splenomegaly, and factor XI deficiency complained of chronic abdominal pain for 6 months before presentation for a surgical consultation. A CT scan showed displaced, normal-sized spleen partially located in the left lower quadrant of the abdomen. The patient was electively operated and a laparoscopic splenectomy was performed. The patient had a normal postoperative period and was discharged 5 days later.

COMMENT

Wandering spleen was first reported in the mid-19th century and was considered the cause of hypochondria and neurasthenia in women [1]. There are known to be two forms of wandering spleen: congenital and acquired. In the congenital form, a developmental failure of the spleen's ligamentous attachments or their laxity occurs [2]. In the acquired form, probably due to hormonal changes and multiparity, wandering spleen appears in early adulthood. As in the first case reported here of a young female with a medical history of hematologic disorder (congenital dyserythropoietic anemia), there are reports of wandering spleen in patients with hereditary spherocytosis [3] and β-thalassemia [4,5].

In most cases, wandering spleen presents as acute abdominal pain. This presentation is usually due to acute onset of ischemia of the spleen caused by rotation of the splenic vascular pedicle. The third case reported here presented with chronic abdominal pain, which is a much less frequent presentation.

On physical examination, most reports consist of a mass or lump located in the hypogastrium.

Non-specific clinical presentation makes radiologic evaluation essential to obtain a diagnosis and to recommend the patient for early surgery. The most effective radiologic modality to make prompt and precise diagnosis is IV contrast enhanced CT.

Surgery is the only modality of therapy. The decision to preserve the spleen depends on its viability and the age of the patient. In the case of acute presentation, ischemia and infarction of the spleen should be expected. Since overwhelming post-splenectomy infection is rare in adults compared to children, a splenectomy can be easily performed.

CONCLUSIONS

Wandering spleen, although reported as rare, has to be considered in the differential diagnosis of acute or chronic atypical abdominal pain in young patients. It is an unusual diagnosis with nonspecific symptoms; hence, it is not considered in the primary differential diagnosis of acute abdomen or chronic abdominal pain, especially when presented in an emergency department. Nevertheless, prompt diagnosis followed by surgery is important and may increase the chance for spleen preservation.

Our case series, presented over a short period of time, emphasizes the need for increased awareness for this pathology.

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References

1. Magowska A. Wandering spleen: a medical enigma, its natural history and rationalization. *World J Surg* 2013; 37 (3): 545-50.
2. Lombardi R, Menchini L, Corneli T, et al. Wandering spleen in children: a report of 3 cases and a brief literature review underlining the importance of diagnostic imaging. *Pediatr Radiol* 2014; 44 (3): 279-88.
3. Polat A, Ozgurler F, Balcı YI, et al. Hereditary spherocytosis and wandering spleen. *Pediatr Hematol Oncol* 2014; 31 (1): 101-3.
4. Akhter MQ, Authoy F, Nabi J, et al. Wandering spleen associated with β-Thalassemia: a case report. *Mymensingh Med J* 2013; 22 (1): 186-91.
5. Ho CL. Wandering spleen with chronic torsion in a patient with thalassaemia. *Singapore Med J* 2014; 55 (12): e198-200.

Capsule

Viral genomes behind HIV remission

Human immunodeficiency virus (HIV)-positive patients are often dependent on continuous antiretroviral therapy (ART) to prevent acquired immunodeficiency syndrome (AIDS) progression (such patients are called noncontrollers). A small proportion of individuals, called HIV post-treatment controllers, sustain HIV remission after receiving short-term ART. To understand the differences between these types of patients, **Sharaf** and colleagues sequenced HIV genomes from plasma samples. Before the interruption of ART, post-treatment controllers had a lower HIV genome reservoir size than noncontrollers by a factor of 7. Post-treatment controllers also had fewer defective HIV genome copy numbers and showed heightened HIV-specific immune responses and slower viral rebound after interruption of ART. Analysis of HIV genome characteristics could provide important information for designing an individual's optimal treatment plan.

J Clin Invest 2018; 10.1172/JCI120549

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