

Letter to the editor

Sonographic findings of wandering spleen

Key words: wandering spleen, sonography, color Doppler imaging, laparoscopic splenopexy

Wandering spleen is a relatively rare clinical entity. A 30-year-old woman who complained of left hypochondralgia after child birth experienced intermittent pain irrelevant to meal intake and physical activities. On physical examination, the spleen was found to be mildly enlarged and palpable at the left subcostal margin. Results of laboratory studies, including full blood count and biochemical indexes, were normal. Sonographic examinations failed to locate the spleen in the normal position, and a low-echoic homogeneous soft-tissue mass was detected in the left side of the abdomen. The spleen was probably dislocated and twisted on its pedicle, and a comb-like echo-free structure was detected concurrently in the hilum of the spleen. Power Doppler ultrasound procedures showed a blood-flow signal inside this structure, suggesting the presence of collateral branches of the splenic vein (Fig. 1A). Plain computed tomography (CT) portrayed findings similar to those of sonography. CT during splenic arteriography also showed a dislocated and rotated enlarged spleen with transformed splenic vein and varices. In addition, a reduced blood supply was detected in the upper part of the splenic parenchyma (Fig. 1B). A tortuous splenic artery and dilated varices of the splenic vein were demonstrated by splenic arteriography. Similarly, magnetic resonance angiography revealed a dislocated spleen and stenosis of the splenic vein associated with abundant collateral branches (Fig. 1C). However, ultrasonographic images that had been taken 1 month before the

patient complained of left hypochondralgia portrayed an enlarged but normally located spleen (Fig. 1D). In the light of these findings, wandering spleen was diagnosed. Consequently, an elective laparoscopic splenopexy was performed.

Four months after the treatment, ultrasonography was performed to evaluate the therapeutic effects. The spleen, located in a normal position, was reduced in size, and the splenic vein was clearly shown to be smooth (Fig. 2A). A CT scan showed similar findings (Fig. 2B). There were no further episodes suggesting the recurrence of wandering spleen.

Wandering spleen is an uncommon entity.^{1–4} It occurs more often in females than in males, especially in females after childbirth.¹ Its precise cause is uncertain. The entity may be congenital or acquired. It has often been suggested to be associated with maldevelopment of the primary splenic supporting ligaments. Its clinical appearance assumes various forms, with the most common complication being torsion of the spleen. Because this acute torsion often causes infarction of the spleen, and, consequently, an abdominal emergency, splenectomy is inevitable under these circumstances.^{2,3} If the diagnosis is made before severe complications occur, elective laparoscopic splenopexy is now the treatment of choice. As ultrasonography can be easily repeated, and as it portrays the shape and position of the spleen on a real-time basis, the preoperative diagnosis of wandering spleen is possible. With advances in ultrasonographic technology, such as color Doppler imaging and power Doppler imaging, the occurrence of torsion or infarction can easily be confirmed. Therefore, ultrasonography is a simple and useful method for diagnosing wandering spleen in patients who complain of intermittent left hypochondralgia, especially in women after childbirth. Because the imaging characteristics may differ from patient to patient,^{3,4} it is important to have accurate information about this entity in order to make a conclusive and correct diagnosis.

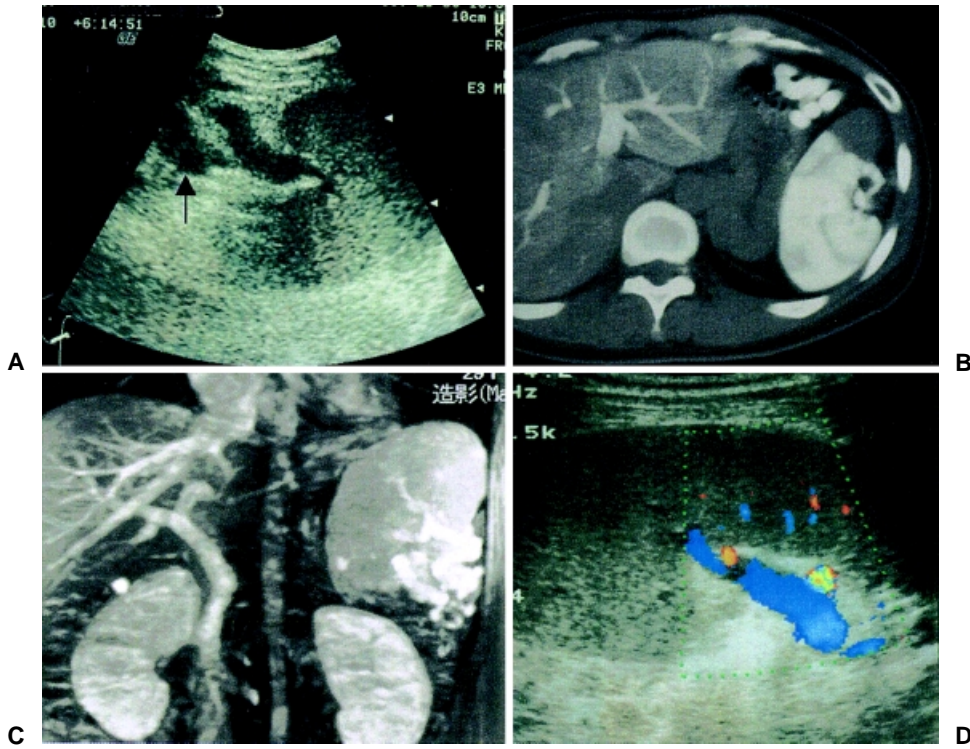


Fig. 1A–D. Preoperative examinations in a 30-year-old woman with wandering spleen. **A** Ultrasonography showed a dislocated and rotated spleen with collateral branches of the splenic vein (*arrow*) at the time that hypochondralgia occurred. **B** Computed tomography (CT) during splenic arteriography portrayed the rotated spleen and varices of the splenic vein. Reduced blood supply was shown in the upper part of the spleen. **C** Magnetic resonance angiography showed the dislocated spleen and abundant collateral branches of the splenic vein. **D** Ultrasonography performed before the patient experienced hypochondralgia detected a mildly enlarged spleen in the normal position

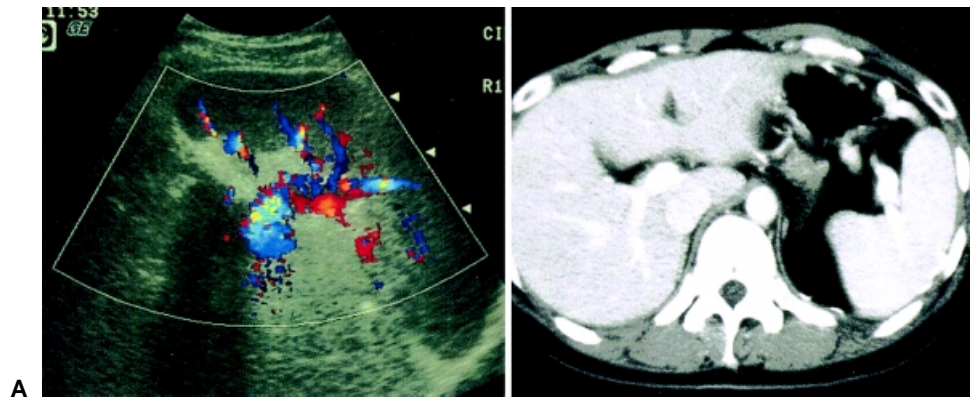


Fig. 2A,B. Examinations in 30-year-old woman with wandering spleen after splenectomy. **A** The normally located spleen was demonstrated by ultrasonography. Color Doppler portrayed the smooth splenic vein without varices around the spleen. **B** CT also showed the spleen, with reduced size, to be in its normal position

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