Internal Bleeding from a Ruptured Serosal Vein Covering the Myoma Surface Mimicking Upper Gastrointestinal Bleeding

Weng-Hsiang Su[1,2]*, Sai-Ming Cheung[1], Sheng-Ping Chang[3], Wen-Ling Lee[4]

[1]Department of Obstetrics and Gynecology, Taoyuan Yee-Zen General Hospital, [2]Institute of Systems Biology and Bioinformatics, National Central University, Taoyuan, [3]Department of Obstetrics and Gynecology, Taipei Veterans General Hospital and National Yang-Ming University School of Medicine, and [4]Department of Medicine, Chen Hsin Rehabilitation Center–Taipei and Institute of Clinical Medicine, National Yang-Ming University, Taipei, Taiwan.

Acute abdomen comprises a number of emergencies, but they should be differentiated between surgical and medical emergencies. Some abdominal emergencies can mimic acute gastroenteritis, but the prevalence of gastrointestinal symptoms in acute gynecologic emergencies is uncertain [1]. We report a case of a patient who presented with a typical clinical diagnosis of an acute gastrointestinal problem, including epigastric pain, vomiting, diarrhea and tarry stool secondary to hemoperitoneum, and who was finally diagnosed with internal bleeding from ruptured tortuous veins on a serosal-type uterine myoma.

A 36-year-old, gravida 3, para 3, woman visited our outpatient clinic and presented with dull abdominal pain and palpable lower abdominal mass. Ultrasound showed a 12 × 9 × 11 cm serosal-type fundal uterine myoma (Figure 1). She denied any problems with her menstruation. Hemoglobin level was 13.3 g/dL. A few days later, she was sent to the emergency department because of a 2-day epigastric pain, vomiting, diarrhea and tarry stool. Her history was unremarkable. On examination, the patient was stable, with a normal heart rate of 74 beats/minute, blood pressure of 120/81 mmHg, and temperature of 36.2°C. Physical examination revealed negative findings, except for the presence of mild tenderness without rebound pain in the lower abdomen. Laboratory data were within normal ranges, but there was a low hemoglobin level of 9.2 g/dL and an elevated white blood cell count (15,400/mm^3), compared with those available 1 week before. The sensitive urine

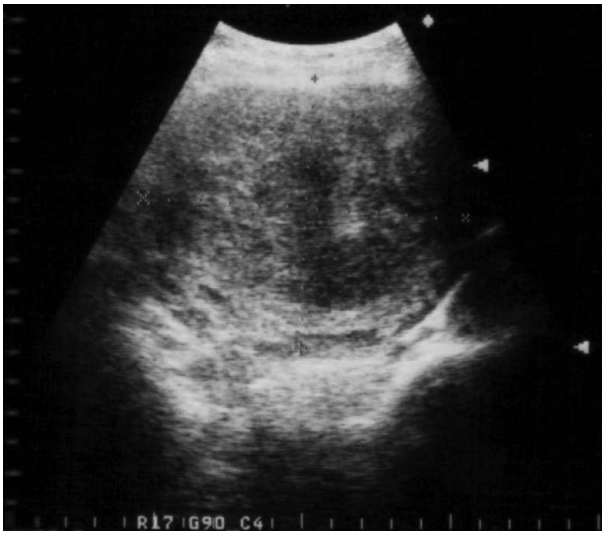

Figure 1. Ultrasound showing a 9 × 11 cm uterine myoma, with minimal fluid in the cul-de-sac.

β-human chorionic gonadotropin test was negative. Gastrointestinal bleeding was first suspected, but both upper and lower gastrointestinal endoscopies showed a normal contour. During hospitalization, the patient complained of worsening abdominal pain. Follow-up ultrasound showed an accumulation of fluid in the bilateral paracolic space (Figure 2), positive for hemoperitoneum by paracentesis. Because of the unstable vital signs, an exploratory laparotomy was arranged for the patient, with the suspicion of internal bleeding and possibility of perforated hollow organs. Operative findings revealed a 1,500-mL hemoperitoneum. A bleeding site was identified on the surface of a uterine myoma (15 × 15 × 14 cm; Figure 3). This bleeder was derived from a superficial, tortuous and dilated vein (Figure 4). Other abdominal organs were essentially normal. Ligation of the ruptured vessel and the follow-up myomectomy was performed uneventfully. The patient recovered well.

Correspondence to: Dr Weng-Hsiang Su, Department of Obstetrics and Gynecology, Yee-Zen Hospital, No. 30, Lane 321, Yang-Hsin North Road, Yang-Mei, Taoyuan, 326, Taiwan.
E-mail: solson.su@msa.hinet.net
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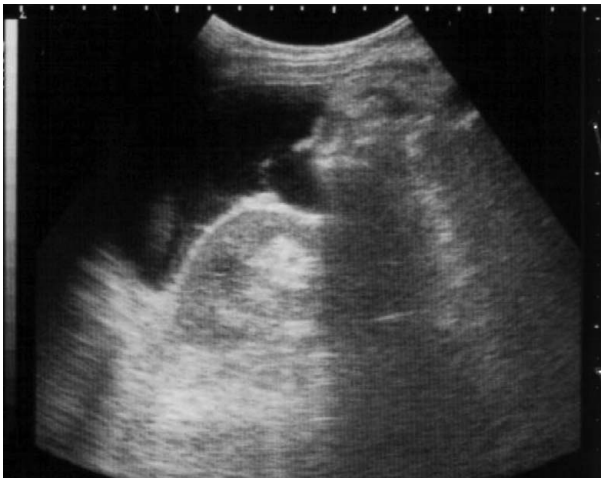

Figure 2. Repeat ultrasound showing fluid accumulation in the paracolic space.

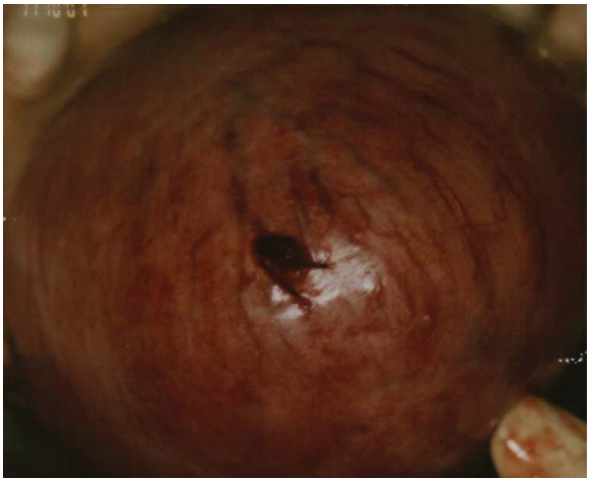

Figure 4. Bleeder with superficial, tortuous and dilated veins around.

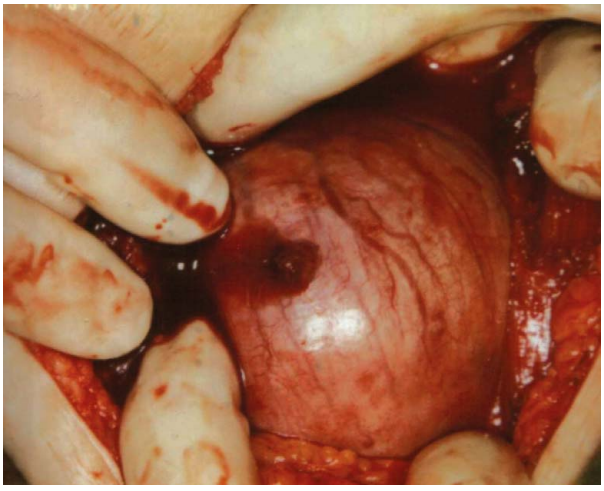

Figure 3. Exploratory laparotomy identified the bleeding site on the surface of the uterus distended by a uterine myoma.

When patients suffer from acute abdomen, determining the diagnosis is often difficult. Among the common diseases, a myoma-related complication is often easily overlooked [2–4].

Internal bleeding originating from a uterine myoma is rare [5–7], although this kind of bleeding occurs more frequently under some circumstances [5], including increased abdominal pressure, trauma, recent pregnancy and menstruation. Increased abdominal pressure can be a result of weight-bearing work, defecation problems, violent coitus, sports, and abdominal massage. The majority of patients were multiparous, and their ages ranged between 30 and 49 years. The reported cases showed that the average weight of the myoma was 3,000 g and the diameter ranged from 10 to 16 cm. In our case, no precipitating factors could be identified.

Although there may be an attack of internal bleeding, the clinical presentation, such as mild or dull abdominal pain without any peritoneal signs, might be less significant. Diffuse abdominal irritation, and guarding and rebounding pain would follow if acute bleeding persisted, resulting in marked hemoperitoneum. In cases with massive bleeding and in life-threatening situations, exploratory laparotomy should be performed immediately, and a preoperative diagnosis might not be required [7]. In the present case, the initial bleeding was less and occurred intermittently, which could explain why the clinical presentation was less significant and the clinical course was longer. Bleeding came from a ruptured vein located just over the dome of the myoma, which protruded into the upper abdominal wall, of which the venous caliber might be partially compressed by the intra-abdominal pressure and the following initiation of the coagulation system. In addition, the protruding mass further spilled upward and irritated the upper abdomen. All these symptoms and signs favored the possibility of upper gastrointestinal bleeding [1].

The sudden drop in hemoglobin level gave us the hint of an acute blood loss state. Rupture of blood-rich organs is most common. In women of reproductive age, a sensitive urine pregnancy test could easily exclude pregnancy-related complications [8–10], and either ultrasound or computed tomography could easily exclude the pathology of bilateral adnexa. In the present case, serial ultrasound examinations provided an economic, useful and valid tool for detecting internal bleeding of the abdomen [11].

Although the preoperative diagnosis is very difficult in a case like this, and rarely accurate [1,5,6], awareness of this possibility helps in the decision of an early operation and a possible laparoscopic surgery.

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