Gynecology and Minimally Invasive Therapy 6 (2017) 49–50

Contents lists available at ScienceDirect

Gynecology and Minimally Invasive Therapy

journal homepage: www.e-gmit.com

Letter to the Editor

A case of secondary amenorrhea caused by uterine myoma successfully treated by a combined laparoscopic and hysteroscopic approach

To the Editor,

Uterine myoma is a common disease. Twenty to 80% of women develop myoma before they reach age 50 years.[1,2] Common symptoms of myoma are menorrhagia, abdominal pain, or subfertility. Here, we report a rare case of secondary amenorrhea with cyclic abdominal pain secondary to obstructive myoma.

A 43-year-old G1P1 woman presented at our hospital with secondary amenorrhea. She had undergone cesarean section 10 years earlier, and her regular period resumed after several months. However, for the past 3 years, she had had intermittent abdominal pain with amenorrhea. She was 163 cm tall and weighed 50 kg. Pelvic examination revealed a uterus of normal size and no adnexal masses. Transvaginal ultrasonography showed a uterus of normal size with normal endometrial thickness (4 mm), normal ovaries, and no echo-free space. It also revealed a hyperechoic solid mass near a cesarean section scar (Figure 1A). A blood test revealed that she had an elevated carbohydrate antigen-125 level (96.6 U/mL) and her estradiol and follicle-stimulating hormone levels were 240 pg/mL and 2.3 mIU/mL, respectively.

She had no withdrawal bleeding after a progesterone test, but presented with abdominal pain and free fluid in the pouch of Douglas on ultrasound. Magnetic resonance imaging demonstrated an inhomogeneous mass (20 mm × 14 mm × 8 mm) near a cesarean section scar (Figure 1B). The presumed diagnosis at that time was secondary amenorrhea caused by obstructive myoma.

During the next menstrual period, the patient underwent hysteroscopy and laparoscopy under general anesthesia. Laparoscopy indicated that the reproductive organs and any other organs examined were normal in size and appearance. However, it revealed sings of bleeding through the fallopian tubes into the peritoneal cavity, as well as the presence of endometriotic lesions in the peritoneal cavity (Figures 2A and 2B). The endometriotic lesions were vaporized using argon plasma (Figure 2C). Histological confirmation of endometriosis was not performed. Hysteroscopy was performed using a standard 24Fr irrigating monopolar resectoscope. Cervical priming before surgery was not done because she complained of severe pain. The cervix was dilated with a size 10 Hagar dilator. The uterine cavity was irrigated using Uromatic S (Baxter, Tokyo, Japan; containing 90 g D-sorbitol in 3 L) by simple gravity flow from approximately 100 cm above the patient according to preposition.[3] Hysteroscopy revealed that the mass was destroyed by cervical dilation (Figure 2D). Complete resection of the mass (weighed 1 g) was achieved by means of the loop with 5-mm chips (Figure 2E). The operating time was 103 minutes, and there was no blood loss, distension medium deficit, or surgical complications. The histopathological diagnosis was leiomyoma (Figure 2F). The patient resumed menstruation 1 month after the procedure, and transvaginal ultrasonography showed a normal uterus (Figure 2G). At her 6-month follow-up, she reported her regular periods and there was no longer any abdominal pain.

In conclusion, obstructive myoma must be taken into consideration when women present with secondary amenorrhea. To the

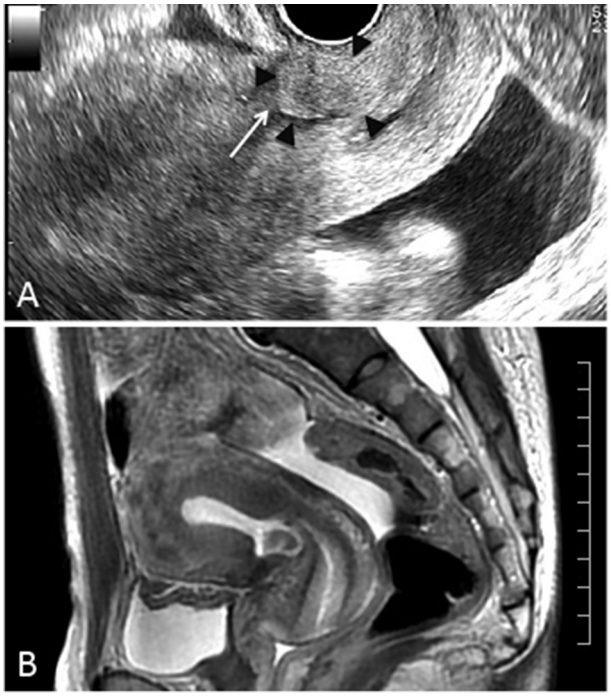

Figure 1. (A) Ultrasound image before surgery. Black arrowheads indicate the solid mass (20 mm × 23 mm) at the foot of the cesarean section scar (white arrow). (B) Preoperative sagittal T2-weighted magnetic resonance image.

Conflicts of interest: The authors have no conflicts of interest relevant to this article.

http://dx.doi.org/10.1016/j.gmit.2016.08.004

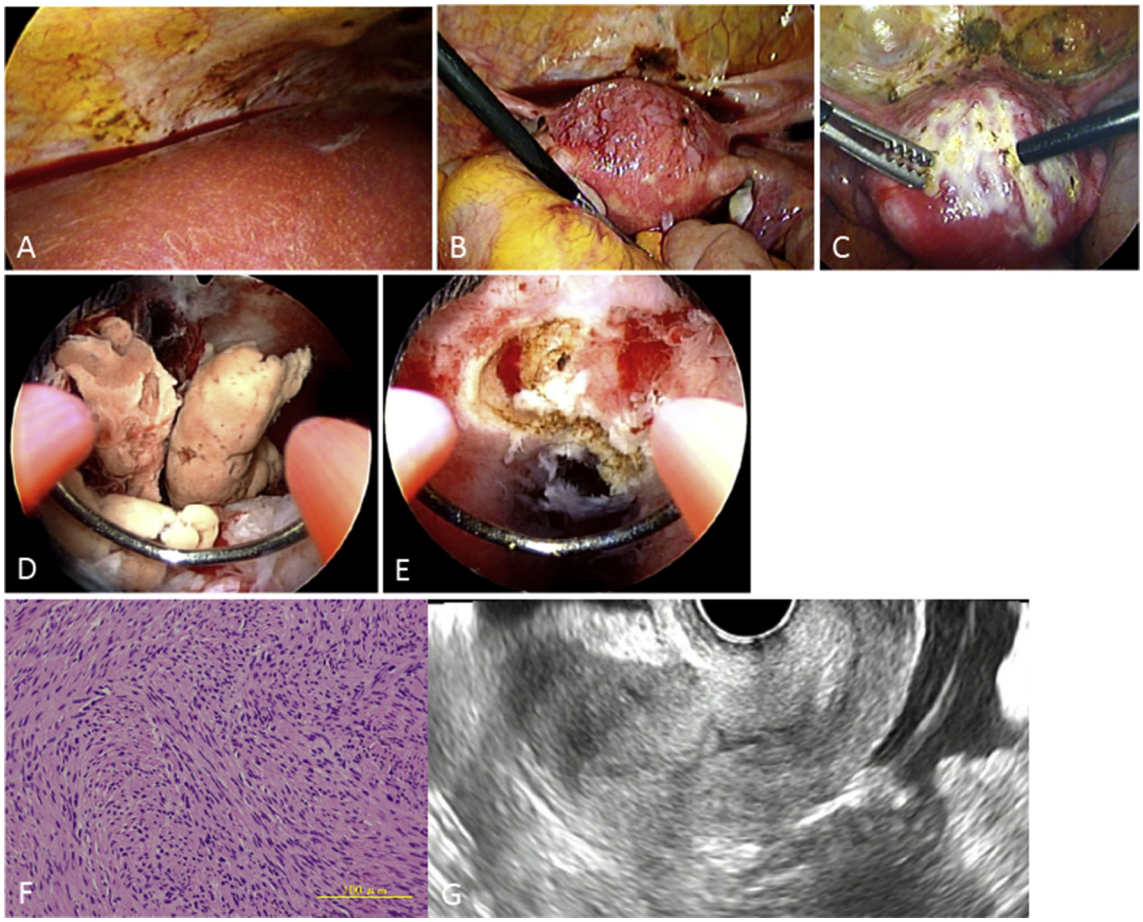

Figure 2. Blood pooling and endometriotic lesions were observed by laparoscopy in Morrison's pouch (A) and pelvic cavity (B). (C) Laparoscopic view after the endometriotic lesions were vaporized using argon plasma. Hysteroscopic view of the myoma destroyed by cervical dilation (D) and the myoma was resected (E). (F) Histology of the pathological specimen shows a typical leiomyoma composed of intersecting fascicles of slender smooth muscle cells (hematoxylin and eosin stain, 100×). (G) Ultrasound image after surgery.

best of our knowledge, this is the first case of secondary amenorrhea resulting from obstructive myoma; however, there are case reports of patients that have had hematometra caused by uterine fibroids.[4] In this case, it was thought that the menstrual blood had flowed back into the peritoneal cavity over several years. Based on the findings of the present case, obstruction of the genital tract must be considered when a patient has uterine myoma. Even if the submucous myoma itself did not cause complete obstruction of the genital tract, adhesion between the myoma and the cervical canal may lead to retrograde flow of the menstrual blood. In this case, we think that peritoneal endometriosis developed in response to the retrograde uterine bleeding, which resulted in elevated serum carbohydrate antigen-125. The combined laparoscopy and hysteroscopy approach was useful for diagnosis and treatment of secondary amenorrhea caused by obstructive myoma.

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12 December 2015
Available online 13 September 2016