Case Report

A rare case of bowel obstruction and intraperitoneal adhesions following uterine artery embolization

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Abstract Uterine artery embolization (UAE) is considered a safe and effective alternative to surgery for the treatment of fibroids. Vaginal discharge, hematoma, fever, postembolization syndrome, fibroid expulsion, and failure are commonly reported complications, while severe vascular complications are rare. Retrospective studies including patients having hysterectomy after UAE indicated the increased prevalence of intra-abdominal adhesions. We are presenting a rare case of severe intra-abdominal adhesions causing bowel obstruction, in need of emergency laparotomy, following UAE.

Keywords: Fibroids, intestinal obstruction, uterine artery embolization

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INTRODUCTION

Although intra-abdominal adhesions are common after uterine artery embolization (UAE), bowel obstruction due to adhesions is very rare. We are hereby presenting a case of intestinal obstruction resulting from previous UAE, requiring emergency laparotomy and adhesiolysis.

CASE REPORT

A 47-year-old nulliparous patient presented with a 2-year history of regular but heavy periods. She also complained of abdominopelvic pressure symptoms. An ultrasound scan demonstrated an enlarged uterus measuring 20.9 × 9.1 × 16.2 cm with a volume of 1602 cc. Multiple fibroids were demonstrated. The largest was 12.2 × 8.7 × 15.7 cm in size and volume of 859 cc. On examination, the uterus was palpable above the umbilicus. The patient had a history of irritable bowel syndrome and was otherwise fit and healthy. Past surgical history included a laparoscopy for early stage endometriosis.

The options of hysterectomy, myomectomy, and UAE were discussed. The patient chose to proceed to UAE in order to avoid surgery. The risk of the procedure was discussed in detail by the interventional radiologist. The patient had an uneventful UAE procedure performed in May 2019. A month later, she was admitted to the gynecological ward with abdominal pain, pyrexia, and hematuria. Her CRP was raised at 322 and the ultrasound scan showed that the fibroid had reduced only slightly in size to 9.1 × 5.7 × 7.5 cm. She was treated with antibiotics piperacillin/tazobactam (Tazocin, Pfizer UK) and was discharged home after 7 days.

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The patient presented to the emergency department in November 2019 with abdominal pain. A CT abdomen showed small bowel dilatation with a transition point identified in the proximal ileum. Adhesional small bowel obstruction due to inflammatory changes associated with a degenerating fibroid was suspected. The patient underwent an emergency laparotomy that confirmed adhesions between the small bowel and the dominant fibroid. Adhesiolysis to release the trapped bowel was performed. There was no need for bowel resection. The patient recovered well and was discharged home 2 days after the procedure.

The patient was reviewed in the gynecology clinic, where the failure of UAE and persistent symptoms were discussed. The patient agreed to proceed to hysterectomy as a definite treatment. It was the patient's request to proceed to subtotal hysterectomy, bilateral salpingectomy, and preservation of the ovaries. The planned procedure was performed jointly with a colorectal surgeon and necessitated significant small bowel adhesionolysis due to the small bowel being "draped" over dense adhesions to the uterus. No small bowel resection was required.

DISCUSSION

UAE is a well-established, safe alternative to surgery for the treatment of fibroids.[1] Prospective studies have shown reduced fertility (due to uterine necrosis/decreased ovarian reserve/premature menopause) and complications in future pregnancies if achieved (abnormally invasive placenta, uterine rupture, postpartum hemorrhage, increased chances of cesarean section). The general consensus is that UAE should not be performed routinely on young women of childbearing age with extensive fibroids.[2] But it offers a nonsurgical uterine preserving option and some women prefer it over myomectomy/hysterectomy.

Cochrane review in 2014[3] concluded that there was very low quality evidence to suggest that fertility outcomes (live birth and pregnancy) may be better after myomectomy than after UAE, but this evidence was based on a small selected subgroup and should be regarded with extreme caution. The UAE group had a shorter hospital stay and a more rapid return to daily activities. With regard to safety, the evidence on major complications was inconclusive and consistent with benefit or harm, or no difference, from either intervention. However, the risk of minor complications was higher after UAE. Moreover, there was a higher likelihood of needing another surgical intervention after the UAE, at 2- and 5-year follow-up. Thus although UAE is a safe and minimally invasive alternative to surgery, patient selection and counseling are paramount due to the much higher risk of requiring further surgical intervention.

The patient whose case has been presented above was nulliparous and hence keen to avoid any surgery in the beginning, but during the course of treatment and with complications following UAE, she decided to go for surgical intervention.

The complications of UAE can be periprocedural (groin hematoma, arterial thrombosis, and pseudoaneurysm), early (postembolization syndrome), or late (vaginal discharge, fibroid expulsion, infection, and ovarian failure). Retrospective data from studies including patients having hysterectomy after UAE revealed an increased prevalence of intra-abdominal adhesions.[4] However, the severity and the impact of these are uncertain. Bowel obstruction has been reported as an extremely rare complication.[5,6] It is reasonable to discuss the increased chance of adhesions and the potential impact on future abdominal surgery prior to UAE. Clinicians should be aware of the rare possibility of bowel obstruction, in patients attending emergencies with acute abdomen, after UAE. A colorectal surgeon's input may be considered in similar cases.

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Conflicts of interest
There are no conflicts of interest.

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