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Treatment of Pedunculated Fibroid With Embozene™

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CASE PRESENTATION

A 52-year-old gravida 0 para 0 woman with a 2-year history of intermittent heavy menstrual bleeding was hospitalized for transfusion due to severe anemia. She also complained of pelvic pain and bulk symptoms including frequent urination. A recent PAP smear and endometrial biopsy both revealed benign cytology. Conservative measures to control bleeding, including hormonal therapy and dilation and curettage had been unsuccessful. The patient wished to pursue uterine artery embolization (UAE).

Previous imaging demonstrated a pedunculated fibroid protruding into the endometrial cavity and lower uterine segment. A fibroid was visible in the upper vaginal vault on speculum exam. Repeat MRI after the consultation showed interval increase in size since 2014. The fibroid measured 4.4 X 2.3 X 2.4 cm. The uterine volume was 137 mL. Thickening of the junctional zone to 25 mm, consistent with adenomyosis, was also noted (Figures 1–3).

PROCEDURE DESCRIPTION

Standard protocol in our center is to perform UAE via radial access after a Barbeau test has confirmed adequacy of ulnar collateral flow to the hand. Ultrasound was used to guide access to the radial artery, and a 4-F hydrophilic-coated radial access sheath was placed. Once access was achieved, the "radial cocktail" containing 3,000 u of heparin, 200 µg of nitroglycerine, and 2.5 mg of verapamil was slowly injected to minimize vasospasm. Subsequently, a 4-F, 120-cm hydrophilic-coated catheter and 2-mm J-tip hydrophilic guidewire were advanced into the distal aorta, followed by catheterization of each internal iliac artery. A Renegade™ Hi-Flo™ Microcatheter was then used to catheterize each uterine artery, and the catheter was parked in the proximal ascending segment (Figures 4–6).

Due to the presence of coexistent adenomyosis, a smaller particle size was chosen, as smaller particle size has shown to be effective in inducing necrosis of adenomyosis.[1] Embolization was then carried out with Embozene™ Microspheres. Each 2-mL vial of 250-µm Embozene™ was mixed with 6 mL of iodixanol 320 contrast and slowly injected. In total, approximately three vials were used.

Patients undergoing UAE at our center are monitored for 3 hours after the procedure, during which hemostasis at the radial access site is achieved with the use of a radial assisted compression device. Postprocedure pain management has been tailored to include the use of a fentanyl patch, nonsteroidal anti-inflammatories with concurrent proton-pump inhibitor, and narcotic pain medications. Over 100 patients have been treated with this protocol with no hospital admissions for pain. In fact, in our experience we have seen improved patient satisfaction since we have moved this procedure to the outpatient setting.

FOLLOW-UP AND DISCUSSION

The patient had an uneventful recovery. At 3 months, repeat MRI showed that the overall volume of the uterus had decreased from 137 mL to 51 mL. The pedunculated fibroid had passed clinically at 3 to 4 weeks without incident. The fibroid was no longer visualized, and there was complete necrosis of adenomyosis with a junctional zone measurement of 4 mm (Figure 7). The patient was asymptomatic and reported light menstrual cycles.

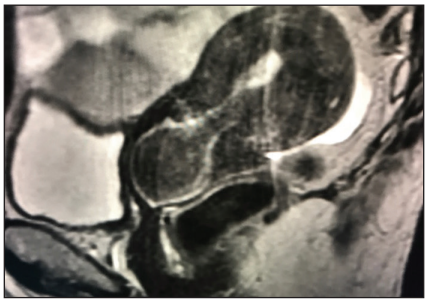

Figure 1.

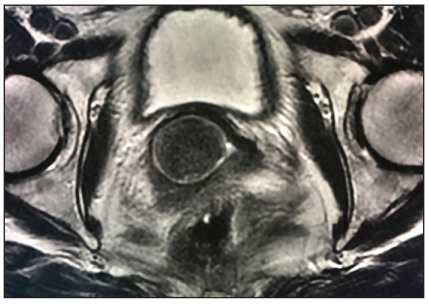

Figure 2.

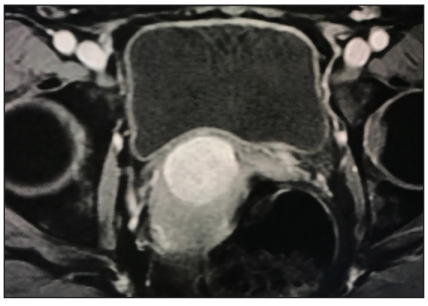

Figure 3.

Results from case studies are not necessarily predictive of results in other cases. Results in other cases may vary.

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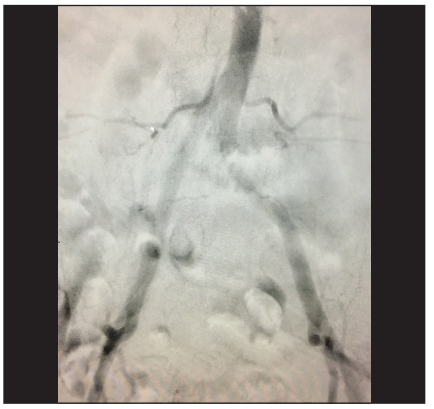

Figure 4.

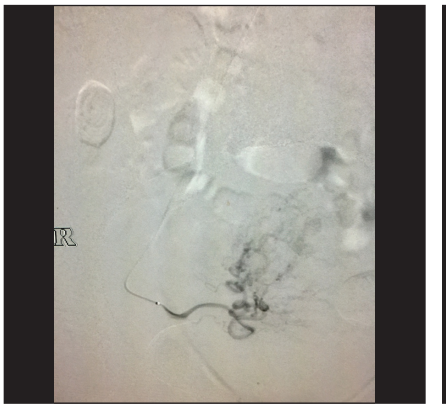

Figure 5.

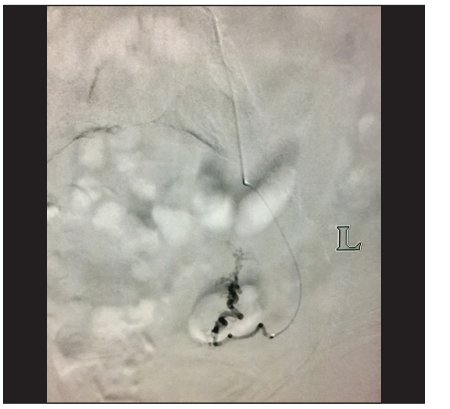

Figure 6.

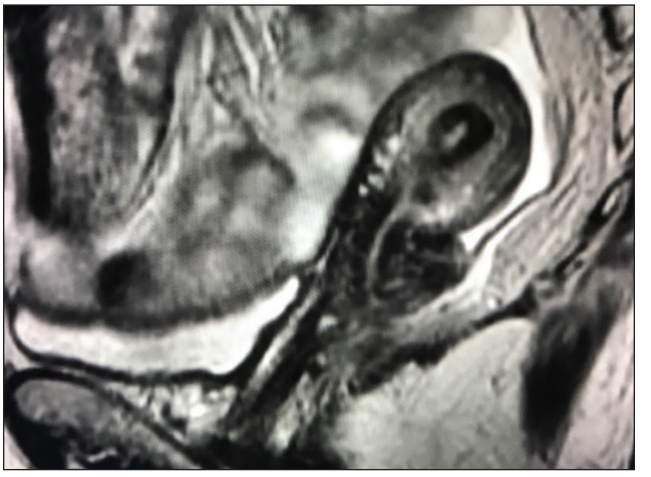

Figure 7.

This case highlights several considerations for UAE. Recommendations for treatment of pedunculated fibroids has been modified over time from more conservative to currently more liberal recommendations. We generally will offer treatment for all pedunculated fibroids after discussions with the patient and referring gynecologist about associated risks of fibroid impaction. This case is particularly interesting noting complete necrosis of the stalk and passage of the entire fibroid. One could postulate this may be related to the smaller particle size used. This case also highlights the safety and efficacy of UAE as an outpatient procedure using radial artery access. ■

1. Kim MD, Kim YM, Kim HC, et al. Uterine artery embolization for symptomatic adenomyosis: a new technical development of the 1-2-3 protocol and predictive factors of MR imaging affecting outcomes. J Vasc Interv Radiol. 2011;22:497–502.

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