

Incidence of non-viable fibroids and other findings resulting in a decision not to embolize on contrast-enhanced pelvic MR in patients referred for uterine artery embolization.

P. Nikolaidis¹, J. C. Carr¹, R. A. Omary¹, F. H. Miller¹, R. M. Mc Carthy¹, H. B. Chrisman¹, R. L. Vogelzang¹

¹Department of Radiology, Northwestern University Feinberg School of Medicine, Chicago, IL, United States

BACKGROUND:

Uterine artery embolization has revolutionized the treatment approach toward women with symptomatic fibroids. In addition to providing greater anatomic detail than ultrasound and aiding in the discovery of co-existing pelvic pathology, viability of fibroids is optimally assessed by contrast-enhanced pelvic MR. The purpose of this study is to evaluate the incidence of non-viable fibroids in addition to other findings that would preclude embolization on gadolinium-enhanced pelvic MR in symptomatic patients referred for uterine artery embolization (UAE). The results highlight the importance of MR in this patient population.

METHODS:

One hundred females were referred for UAE for treatment of symptomatic fibroids between March and August 2003. Indications included menorrhagia, pelvic pain and urinary symptoms. Pelvic MR, including multiplanar T2-FSE and pre/post gadolinium fat-saturated T1 FS-SGE (SHARP) sequences was obtained on 94 patients. MR examinations and patient charts were retrospectively reviewed. All fibroids measuring over 3 cm were recorded (including size, location, and degree of enhancement).

RESULTS:

Non-viable fibroids were present in 20% of patients. In 6 patients (6%), it was decided not to proceed with UAE as there was either one dominant non-enhancing fibroid, or most (or all) of the fibroids were non-enhancing, rendering UAE ineffectual. Another 11 patients (12%) were not embolized based on other MR findings, including large (n=4) or diminutive (n=3) uterine or fibroid size, and adenomyosis (n=4). Four patients (4%) were referred to hysteroscopy for further evaluation of endometrial lesions (n=2) or resection of submucosal fibroids (n=2).

CONCLUSION:

Pre-embolization gadolinium-enhanced MR is highly useful in the evaluation of patients referred for UAE. In over one fifth of patients, MR findings resulted in a decision not to proceed with UAE. In addition to the discovery of coexisting pelvic pathology, including adenomyosis and endometrial lesions, lack of viability of fibroids can be assessed by contrast-enhanced MR.

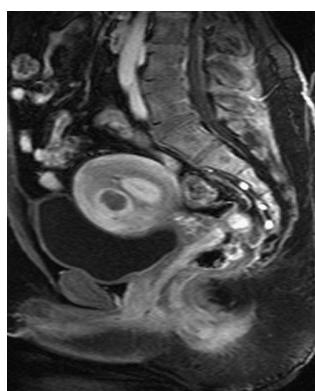


Fig 1



Fig 2a

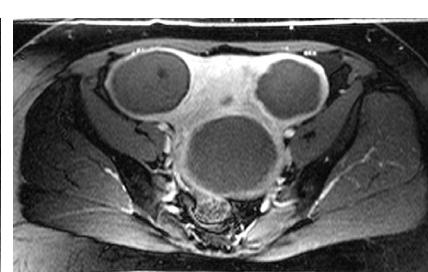


Fig 2b

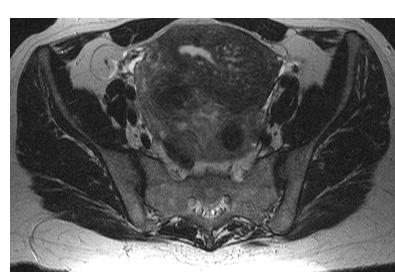


Fig 3

Fig 1. Coronal post-gadolinium T1 FS-SGE image in a patient demonstrates an enhancing submucosal and a small intramural non-viable fibroid. Patient was referred to hysteroscopy. Fig 2. Coronal (a) and axial (b) post-gadolinium T1 FS-SGE images in two different patients show dominant non-viable fibroids; there would be no benefit from UAE in these patients. Figure 3. Axial T2-FSE in a patient suspected to have uterine fibroids demonstrates focal adenomyosis.