MR Imaging of Adenomyosis: Changes with Uterine Artery Embolization

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OBJECTIVE: The purpose of this study was to describe the MR imaging features for patients with predominant adenomyosis treated with uterine artery embolization.

MATERIALS AND METHODS: Sixteen patients with the diagnosis of adenomyosis were treated with uterine artery embolization (UAE). The inclusion criteria for the study was the presence of adenomyosis (junctional zone >12mm) and absence of fibroids greater than 4 cm. MR imaging was performed pre- and 4 months (range: 2-8 months) post UAE. We analyzed the following features: uterine volume, thickness of junctional zone, the junctional zone/myometrial ratio, distribution of adenomyosis (symmetric, asymmetric or focal), and enhancement pattern of adenomyosis after contrast administration. All 16 patients completed a symptom questionnaire before and after UAE.

RESULTS: In the 16 patients, the mean uterine volume decreased by 24% after UAE. There was no significant change in mean junctional zone width before or after UAE, 36mm and 32mm, respectively. Similarly, in these 16 patients, UAE did not cause any significant change in mean junctional zone/myometrial ratio, 0.77 and 0.76, respectively. Twelve of the 16 patients had asymmetric or focal distribution (adenomyoma) patterns of adenomyosis. Of the 15 cases performed following contrast administration, 11 patients had regions of devascularization within the adenomyosis, while 4 cases showed no evidence of devascularization. An asymmetric pattern of adenomyosis was seen in 8/11 of the devascularized group, while no dominant pattern of adenomyosis was seen in the group with persistent vascularity. There was no significant difference in the mean thickness of the junctional zone, nor the junctional zone/myometrial ratio between these two groups. All 16 patients reported improvement in clinical symptoms.

CONCLUSION: Uterine artery embolization in patients with dominant adenomyosis results in a decrease in uterine size and regions of devascularization within the adenomyosis. The change in vascularity may be dependent on the distribution of adenomyosis. Patients with adenomyosis show improvement of clinical symptoms after UAE.

REFERENCE: