

## Case Report: Adenomyosis Embolisation

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### Case Presentation

Female patient, 44 years of age, suffered for more than 5 years from heavy menstrual bleeding (menorrhagia) and pelvic pain (dysmenorrhea, dyspareunia). She was referred by her family doctor to the gynecologist, since medical therapy turned out to be unsuccessful. Her gynecologist offered her three options; local or systemic medical treatment (an intra-uterine device e.g. the Mirena coil®, hormone therapy, GnRH-agonists), hysterectomy, or uterine artery embolization. Because she already had tried too many options of medical treatment and wanted to

preserve her uterus she decided to try the uterine artery embolisation. Once, the gynecologist confirmed the diagnosis with transvaginal ultrasound, she was sent to the Radiology department for a less operator-dependant Magnetic Resonance Imaging (MRI) scan. MRI scanning with a sensitivity (80%) and specificity (90%) may demonstrate the classic features of pure adenomyosis including a broadened junction zone of more than 12 mm thickness surrounding the uterine cavity, with high intensity foci on the T2-weighted MRI-image with sometimes an enlarged uterus (**Figure 1**).



**Legend Figure 1:** MRI T2-weighted image demonstrates a 45.8 mm thickened junction zone surrounding the uterine cavity, with multiple small

white spots (the high intensity lesions) and an enlarged uterus in the pelvis.



After the MRI scan confirmed the diagnosis of pure adenomyosis and ruled out any other pelvic pathology, she was admitted a few weeks later to the department of Radiology where she underwent the uterine artery embolisation for adenomyosis performed by the interventional radiologist. Under local anesthesia of both groins bilateral femoral access was obtained and small (micro) catheters were advanced in the left and right uterine artery to engage the adenomatous tissue of the uterus. Embolisation

was performed using microparticles, called microspheres between 300-500  $\mu\text{m}$  in size, to occlude the uterine artery branches toward the adenomyosis (Figure 2a and 2b).

**Legend Figure 2a:** Diagnostic angiographic image with contrast injection through catheters positioned in both uterine arteries depicts the uterine artery branches and the vasculature of the adenomyosis prior to the embolisation.



**Legend Figure 2b:** The proper final angiographic embolisation end-point which demonstrates occlusion of both distal ends of the right and left uterine artery to

secure intentional 100% infarction of the adenomyosis.



After one hour intervention the patient returned to the gynecology ward and was discharged from hospital the next day. Three months after the embolisation procedure the patient visited the hospital for her follow-up MRI scan with contrast showing 100% infarction of the adenomyosis (**Figure 3a and 3b**) with preservation of her uterus, informing the gynecologist to be very satisfied with the

embolisation treatment end-result with complete clinical improvement, without any symptoms of heavy menstrual bleeding or pain anymore.

**Legend Figure 3a:** Contrast T1-weighted MRI image with enhancement of the enlarge uterus with thickening (arrows) of the junction zone surrounding the uterine cavity (oval circle) prior to the embolisation procedure.



**Legend Figure 3b:** Contrast T1-weighted MRI image, 3 months after the intervention, demonstrating non-contrast enhancement of the adenomyosis as a

result of 100% infarction of all adenomatous tissue after embolisation with preservation of the uterus.



### **Citation of this Article**

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