UTAH VALLEY IMAGING

MRI OF THE FEMALE PELVIS

An Effective Imaging Tool for Evaluating Conditions of the Uterus, Ovaries and Adnexae

ACR AMERICAN COLLEGE OF RADIOLOGY ACCREDITED FACILITY

MRI is the most sensitive and specific imaging modality available for imaging the female pelvis. The ability to obtain excellent soft tissue contrast and the multiplanar acquisition capabilities of MRI allow for very detailed evaluation of the uterus, ovaries and other soft tissues. Whereas CT of the pelvis is often nonspecific, requires ionizing radiation and is limited by artifact from the bony pelvis, MRI has no such limitations. MRI is extremely helpful in differentiating between ovarian/adnexal pathology such as simple cysts, hemorrhagic cysts, endometriomas, ovarian dermoid (cystic teratoma), malignancy, and pedunculated uterine fibroids.

Fig A: Utah Valley Imaging (UVI) Axial T1 SE image demonstrates a left ovarian mass with a prominent area of high T1 signal intensity suggesting fat vs. blood products.

Fig B: UVI Axial T1 SE Fat-saturated image with contrast demonstrates impressive T1 signal loss within the mass consistent with fat. Diagnosis: Ovarian dermoid (benign cystic teratoma).

MRI is also useful in the workup of uterine masses, adenomyosis and endometrial pathology. It can help in preoperative or preembolization planning for treatment of uterine fibroids. MRI can aid in differentiating between uterine adenomyosis and small uterine fibroids in the patient with chronic pain referable to the uterus. Especially in cases of adenomyosis, the pelvic US is often inconclusive and MRI is an excellent option for these difficult cases. MRI is also helpful in the workup of possible endometrial cancer. It can often differentiate between malignancy, hyperplasia and endometrial polyp.

Fig C: UVI Sagittal T2 Fat-saturated image demonstrates an anteflexed uterus with a markedly thickened junctional zone related to uterine adenomyosis. Also noted is a posterior pedunculated fibroid.

Fig D: UVI Sagittal T2 Fat-saturated image in a different patient demonstrates an anteflexed uterus with a 5 cm. anterior fundal mural fibroid. The junctional zone and endometrium are normal.

In summary, MRI is an amazing tool which is well-suited to evaluate the female pelvis and can aid in the diagnosis and characterization of benign and malignant conditions of the uterus, ovaries and adnexae.

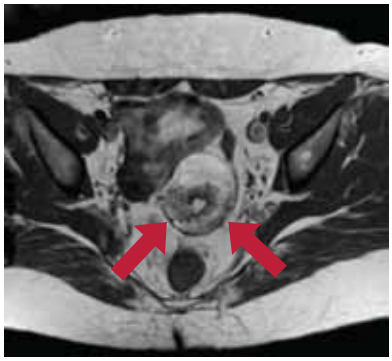

Figure A

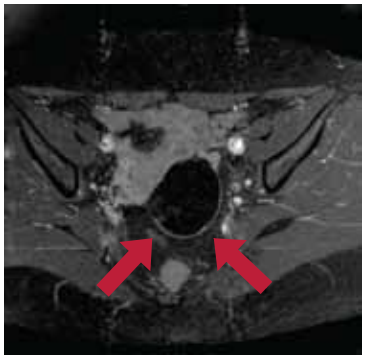

Figure B

Figure C

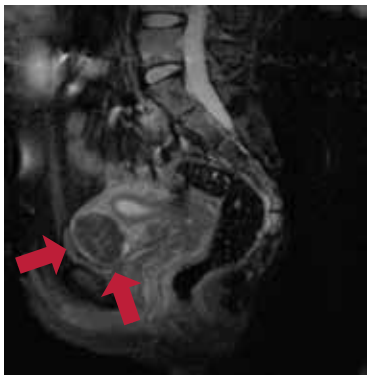

Figure D

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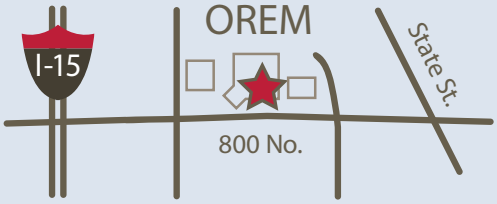

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