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ADVANCED IMAGING CENTER

PHYSICIAN NEWS

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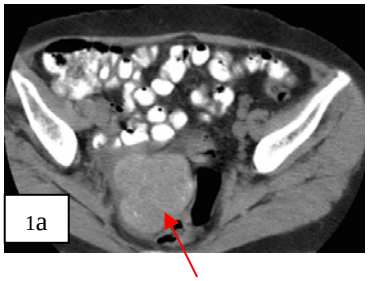
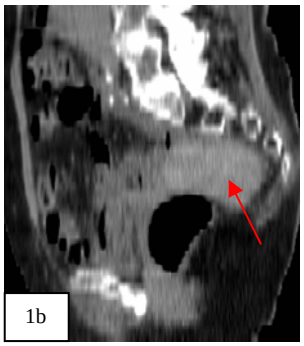
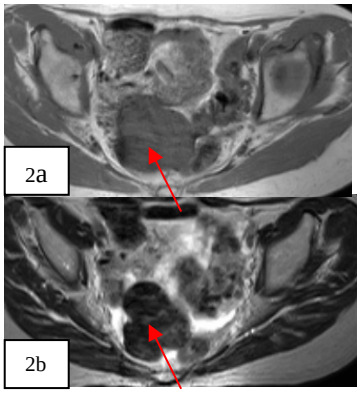
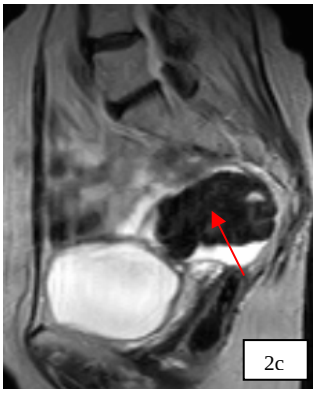
INTERESTING CASE PRESENTATION
BRENNER TUMOR OF THE OVARY









CLINICAL PRESENTATION: This 77-year-old female presented to the office of **Dr. Pamela De Silva** with lower abdominal discomfort and constipation. Physical exam revealed no mass. The patient was referred to AIC for a **helical CT** of the abdomen/pelvis. Subsequently, an ultrasound and an MRI (the latter ordered by **Dr. John Birsner, Jr.**) were performed. The patient has a history of hysterectomy. Patient claims allergy to iodine.*

IMAGING FINDINGS: **Fig. 1a-b** show axial and reformatted sagittal CT images of the pelvis revealing a 7 cm lobular dense mass with amorphous calcifications in the right posterior pelvis displacing loops of bowel. IV contrast was not administered due to possible allergy to iodine. The ultrasound (not shown) was non-diagnostic as the patient was unable to keep a full bladder to perform an adequate transabdominal pelvic ultrasound, and the mass was obscured by adjacent loops of bowel on endovaginal sonography. The patient subsequently underwent colonoscopy revealing no colonic masses. The patient was then referred to **Dr. John Birsner, Jr.**, who ordered an MRI of the pelvis with and without Gadolinium contrast in order to confirm the presence of a mass and to characterize it better. **Fig. 2a-c** show axial T1 weighted, axial T2 weighted, and sagittal T2 weighted images, respectively, obtained on an **OPEN MRI** due to patient's claustrophobia. They reveal a 5x6x7 cm mass in the right posterior pelvis/presacral space, postero-superior to the bladder with low T2 signal. Heterogeneous enhancement was noted on postcontrast images (not shown) confirming a solid nature.

DIFFERENTIAL DIAGNOSIS: Based on the CT, a GI or GU mass was suspected. Negative colonoscopy virtually ruled out a GI mass. The low signal intensity on T2 weighted MR images suggest a calcified or fibrous mass. A uterine mass (such as a fibroid) could have this appearance, but the patient has had a hysterectomy in the past. As a result, an adnexal mass was suspected, such as a fibroma.

PATHOLOGIC DIAGNOSIS: The patient underwent exploratory laparotomy by **Dr. John Birsner, Jr.**, and an ovarian tumor was removed. Pathology revealed a transitional cell adenofibroma (Brenner tumor) of the right ovary with no evidence for malignancy.

DISCUSSION: Brenner tumor is a rather uncommon type of ovarian neoplasm, grossly identical to a fibroma. It has a low malignant potential. Brenner tumors may have estrogen activity and may cause endometrial hyperplasia or virilism. They are also associated with mucinous cystadenomas. Extensive amorphous calcification in a solid mass or solid component in a multilocular cystic mass is a characteristic finding of Brenner tumor of the ovary on CT and MRI.

For more information, you may call me at (661) 949-8111, Dr. De Silva at 948-3899, or Dr. Birsner at 949-7717.

Ray Hashemi, MD

Ray Hashemi, MD, PhD, Director

*Clinical information provide by Pamela De Silva, MD (internist) and John Birsner, Jr., MD (OB-GYN) in Lancaster.