Case 6567

Ovarian adenofibroma: diagnosis with MRI
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Section: Genital (female) imaging
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Patient: 45 years, female

Clinical History:
A 45-year-old woman admitted to our hospital for a control.

Imaging Findings:
A 45-year-old woman was admitted to our hospital for a control. First an ultrasound was performed which showed an right hypoechogenic ovarian rounded mass. Its size was 7x5cm. Subsequently a pelvic Magnetic Resonance was performed which revealed an ovarian right cystic and papillar mass. This mass enhanced contrast material. Besides it reveals liquid in Douglas space. The patient underwent a surgical resection. The histological diagnosis was adenofibroma.

Discussion:
Adenofibromas are benign compound tumours composed of intermingling neoplastic epithelial cells and fibroblasts of varying proportions. The solid, semisolid or cystic appearance of the tumour depends upon the relative amount of the epithelial and stromal components and the secretory activity of the epithelial component. The commonest symptom presented by patients with this tumour is abdominal pain. Other symptoms include vaginal bleeding, increased girth, dysuria, feminization and rectal urgency. The cause of vaginal bleeding and feminization is unclear but it is suspected to be due to the excessive estrogen excretion by the tumour and subsequent abnormal endometrial growth. Sonographically, adenofibromas have special characteristics. Unlike most benign ovarian neoplasms, which are simple cysts, these tumours appear as complex ovarian cysts with a solid element, septations, or papillations. Many of these complex cysts are relatively large with a mean diameter of 9 cm, besides the gross aspect of the tumour may also appear deceivingly malignant. CT reveals only a large cystic mass with enhancing solid portion. MR imaging has significant advantages over CT or ultrasonography for characterizing the tissue of ovarian masses. Gadolinium-enhanced MR imaging is highly accurate for the detection and characterization of complex adnexal masses, with excellent inter- and intra-observer agreement. MR imaging can be recommended as a reliable and reproducible modality for the assessment of complex adnexal masses. On MRI, lesion appears as a multiloculated cystic mass with enhancing septa and solid portions tumor appears as cystic well delimited mass or like a serous cystadenoma or a mass with mural nodules and fibrous septums. Sometimes solid fibrous parts don't have a low signal intensity on the T2 weighted images and they can show enhancement after the administration of contrast material. The differential diagnosis of ovarian adenofibroma should include ovarian masses with fibrous components, including fibroma, fibrothecoma and Brenner's tumor. The fibrous components of these masses tend to have very low signal intensity on the T2-weighted MR images. Ovarian fibromas may mimic malignancy, but they have a characteristic MR appearance that consists of a solid mass of very low signal intensity tissue on the T2-weighted sequences. The low signal intensity on the T2-weighted sequences is the result of dense fibrous tissue in these tumors. Brenner's tumors manifest as a multilocular cystic mass with a solid component or as
a small, mostly solid mass. Brenner's tumors may have an abundant fibrous stroma, resulting in low signal intensity on the T2-weighted images. Extensive amorphous calcification is often present within the solid component. Metastatic ovarian tumors with a highly fibrous component, and particularly those from the gastrointestinal tract, often demonstrate hypointense solid components on the T2-weighted images with strong enhancement in the bilateral complex masses. Struma ovarii may have a multicystic tumor with a solid component, a multilobulated surface and low signal intensity on the T2-weighted images with no contrast enhancement that indicates the presence of viscid gelatinous materials. Struma ovarii is usually associated with hyperthyroidism. The treatment of adenofibroma is surgical and consist of total abdominal hystectomy and bilateral salpingo-oophorectomy or unilateral salpingo-oophorectomy.

**Differential Diagnosis List:** Adenofibroma

**Final Diagnosis:** Adenofibroma

**References:**


Figure 1

**a**

Description: T2 Coronal sequence. Ovarian right mass with solid and cystic components. **Origin:**

**b**

Description: Axial T2 sequence. Ovarian right mass with solid and cystic components. **Origin:**
Description: Axial T2 sequence fat sat. Ovarian right mass with solid and cystic components. Origin:
Figure 2

Description: Microscopic appearance of adenofibroma: epithelial and stromal cells. Origin:

Stromal cells have fusiform aspect. Origin: