Case 2048

MR findings in a case of ovarian mucinous cancer
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Section: Genital (female) imaging
Imaging Technique: MR

Clinical History:
The patient was admitted because of abdominal pain and the presence of an abdominal mass located in the hypogastric region.

Imaging Findings:
The patient was admitted because of abdominal pain and the presence of an abdominal mass located in the hypogastric region. On physical examination this mass was found to be of a ligneous consistency. Body temperature and laboratory findings were normal. For further evaluation, the patient underwent an MRI examination. These imaging findings, combined with the clinical history were highly suspicious for ovarian mucinous cancer. This diagnosis was subsequently confirmed by histological examination of the surgically resected mass.

Discussion:
Ovarian tumours are classified by cell type of origin. The aetiology of ovarian cancer is still unclear, although some risk factors have been identified such as: advancing age; nulliparity; a personal history of endometrial, colon, or breast cancer; and a family history of ovarian cancer. Conversely, the oral contraceptive pill has been shown to reduce the risk of ovarian cancer by 40%. The main categories of tumour are: epithelial, germ cell, sex cord/stromal tumours, steroid cell tumours, and metastatic tumours from elsewhere in the body. Epithelial types are the most common (>70%) and are classified as serous cystadenocarcinoma (the most common type), mucinous cystadenocarcinoma, endometrioid cystadenocarcinoma and clear cell adenocarcinoma. Most cases of hereditary ovarian cancers are serous cystadenocarcinomas. Mucinous cystadenocarcinomas are rarely seen in familial cancer. Ovarian carcinoma can spread by local extension, lymphatic invasion, peritoneal implants, haematogeneous metastasis, and transdiaphragmatic passage. The most common mode of spread is peritoneal implantation. Once an ovarian carcinoma reaches 10-15cm in size, it has often already spread beyond the ovary and seeded the peritoneum. Unfortunately, ovarian cancer is often diagnosed only after it has metastasised. Early detection is the key to improving survival.

MRI is a very useful imaging modality to determine the origin of a pelvic mass using multiplanar imaging and high soft-tissue contrast and secondly, to differentiate malignant and benign lesions with an accuracy of 60-99%.
Magnetic resonance imaging findings are not specific for cell types of ovarian carcinoma, although some features are more typical of one histology than another. For instance mucinous tumours frequently display imaging features similar to those of other mucin-laden tumours such as an intermediate to high signal intensity on T1- and T2-weighted images.

**Differential Diagnosis List:** Ovarian mucinous cancer

**Final Diagnosis:** Ovarian mucinous cancer

**References:**


Description: The hyperintensity of the signal of the mass suggests a cystic lesion. Origin:
**Figure 2**

**Description:** After fat suppression, the hyperintensity of the signal still remains, thus indicating the presence of fluid. **Origin:**
**Description:** Within the mass there is solid material, referred to as clots. **Origin:**
Description: The mass appears hyperintense, thus indicating the presence of mucinous material.
Origin:
Description: The mass shows peripheral enhancement. Origin: