Squamous Cell Carcinoma Differentiation of Ovarian Mature Cystic Teratoma in a Postmenopausal Woman Presented As Acute Abdomen

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To emphasis that, although it is rare, the mature cystic teratomas can transform to malignancy and can be cause of acute abdomen.

A 61 year old postmenopausal woman who had been operated because of acute abdomen and adnexal mass and the pathologic result was reported as squamous cell carcinoma differentiated from mature cystic teratoma.

It has to be keep in mind, due to the compounds of mature cystic teratomas, they are tend to torsion, can be cause of acute abdomen and rarely, malignant differentiation can be seen.

Key Words: Acute abdomen, Neoplasm, Ovary, Teratoma

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Introduction

Mature cystic teratoma (MCT) is defined as a tumor that contains elements of mesoderm, endoderm and ectoderm. The content of this cystic formation may include sebum, hair, skin and occasionally teeth as well.[1,2] MCT is the most common ovarian germ cell tumor of the ovary in young women and accounts for 10-20% of all ovarian tumors. However, malignant transformation of MCT is rare, but mostly squamous cell carcinomas (SCCs), and the reported incidence is 1-3%. Compared with benign MCT, malignant transformation occurs in older population, with a mean age of 45–60 years.[3] The torsion rate in ovarian MCT is higher than in other ovarian tumors because adipose tissues, which are abundant in MCT of the ovary, increase the fluidity of the MCT in the pelvic cavity.[4] Its clinical course is usually insidious and the symptoms include acute abdominal pain, distention secondarily to the presence of the tumor as well as pressure symptoms from the adjacent pelvic organs. In this case we have discussed a 61 year old postmenopausal woman with mature cystic teratoma differentiation to squamos cell carcinoma presented with acute abdomen.

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Case Report

A 61-year-old Gravida 6 Para 6 patient was presented to our gynecology clinic with acute abdominal pain. The ultrasonographic examination revealed a septated mass with dimension of 17x11 cm, containing solid and cystic components, originating from the right ovary extending to the pouche of Douglas. Preoperative tumor marker levels were as following; CA 125: 95 U/ml, CA 19, 9: 76 U/ml and CEA:12 ng/ml. The preoperative diagnosis was dermoid cyst according to the ultrasonography and laboratory findings. She underwent exploratory laparotomy and there was a semi-torsioned mass originating from the right ovary and conglomerated with intestine with dimension of about 20 cm. The part of mass that lies on the intestinal loops resected and send to frozen section investment. The other part was extending to the retroperitoneum and invading the superior and inferior mesenteric vessels. The general surgeons decided not to remove whole mass because of possible injury to the intestinal vessels considering the patients age and vital conditions. The frozen section result was malignant epithelial tumor differentiated from dermoid cyst. She had abdominal hysterectomy and left salpingo-oophorectomy subsequently. The postoperative vital signs worsened and she transferred to the intensive care unit. The gross pathologic specimen consisted of uterus with cervix and bilateral tubes left and a part of right ovary. The excised right ovary part was with measuring of 15 cm showed a multilocular cyst containing yellowish material and hair. The sections from solid and wide necrotic tissue was with high mitotic activity and islands of carcinoma cells having clear to eosinophilic cytoplasm, and vesicular nucleus, mild to moderate pleomorphism (Figure 1, 2). Sections from the cervix, en-

dometrium, myometrium, right and left tube and left ovary were unremarkable. The omentum was negative for cancer. The peritoneal cytology contain atypical malignant squamous cells. Based on these findings, the diagnosis was squamous cell carcinoma arising in a mature cystic teratoma.

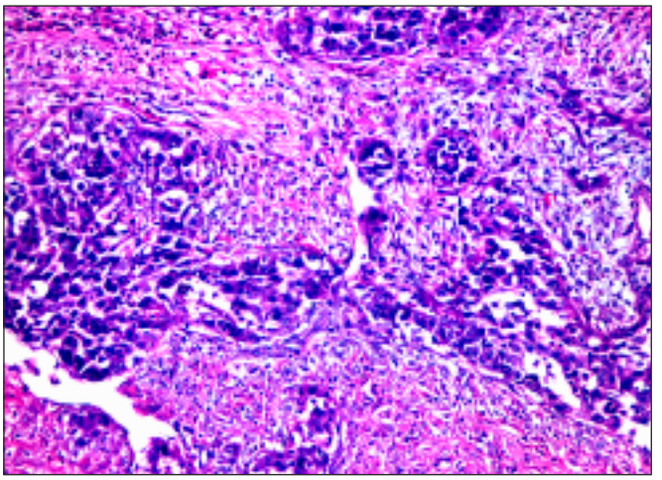

Figure 1: The photomicrograph shows islands of carcinoma cells having clear to eosinophilic cytoplasm, and vesicular nucleus, mild to moderate pleomorphism with high mitotic activity. (H&Ex40)

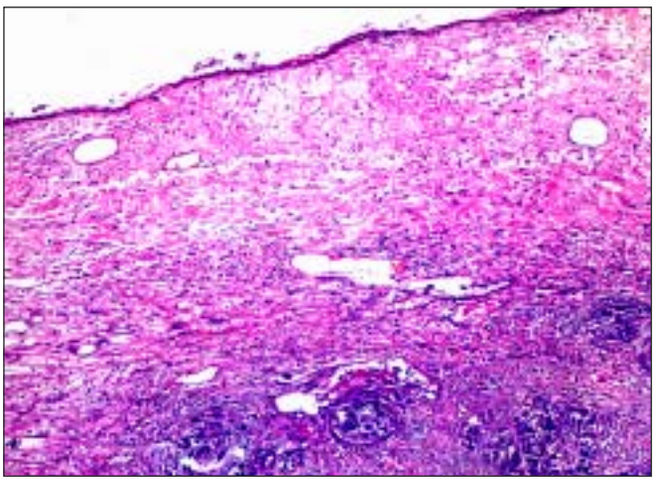

Figure 2: The photomicrograph shows islands of carcinoma cells. (H&Ex10)

Discussion

MCT is defined as a tumor that contain elements of the mesoderm, endoderm and ectoderm.[1] Because of this variability the malignant differentiation of MCT can include adenocarcinoma, chondrosarcoma, carcinoid tumour, sebaceous carcinoma, melanoma, small cell carcinoma and most commonly SCC.[5] SCC comprises about 75% cases of the malignant transformation to the MCT.[6] Histogenetically, SCC in MCT has been considered to arise either from the epidermis or from the respiratory epithelium.[5] Patients with malignant transformation of MCTs are typically post-menopausal and may present with a rapidly enlarging tumor or systemic symptoms that suggest for malignancy. The torsion rate in ovarian MCT is higher than in other ovarian tumors because of adipose tissue component.[4] In our case, the patient was postmenopausal and admitted with acute abdominal pain with peritoneal irritation findings. This presentation was due to semi-torsion of the adnexal mass that had been diagnosed during the surgery.

There are some laboratory and imaging studies for the diagnosis of MCT. The benign MCT is characterized in the imaging studies by the presence of sebaceous liquid component as well as a heterogeneous solid component protruding into the cavity. Another attribute of the MCT is the identification of a soft tissue protuberance known as the Rokitansky nodule, of dermoid plug. It has also been described that the angle formed between the inner cyst wall and the soft tissue components is a sensitive marker of malignancy.[2] The tumor diameter in the imaging studies larger than > 9.9 cm is with increased risk of carcinogenesis.[7] There are several studies that have investigated the diagnostic value of tumor markers in cases of malignant transformation of MCTs. Mori et al.[8] state that the use of single markers is not particularly effective and have found that SCC levels of <2.5 and age <40 years have a 77% sensitivity and 96% specificity in predicting malignant transformation.

SCC arising in MCT of the ovary has been associated with a very poor prognosis.[6] Age, tumor size, clinical stage, histologic differentiation, capsular invasion and the presence of vascular invasion can provide valuable information for predicting the survival of patients with SCC arising from MCT .[7] SCC of the ovary spreads transmurally with extensive local invasion, which differs from common ovarian tumors. Overall 5-year survival rate of 52% has been reported by Hirakawa et al.[9]

Even though there is no consensus on the treatment, nowadays aggressive cytoreduction followed by cisplatinum-based chemotherapy with or without sequential radiotherapy, has been recommended.

In conclusion mature cystic teratoma of the ovary rarely transform into malignancy. The rate of torsion is higher than the other ovarian tumors and the surgeons should consider this malignancy potential during the urgent surgeries.

Akut Batınla Başvuran Postmenopozal Bir Hastada Ovaryan Matür Kistik Teratomdan Gelişen Squamöz Hücreli Karsinom

Matür kistik teratomlardan nadir de olsa malign transformasyon gelişebileceği ve akut batın tablosuna neden olabileceğini belirtmek.

61 yaşında akut batın ve adneksiyal kitle nedeniyle opere olan ve patoloji sonucu matür kistik teratomun squamöz hücreli karsinoma farklılaşması olarak rapor edilen postmenopozal bir kadın hasta sunulmuştur.

İçeriklerinden dolayı matür kistik teratomların torsiyona yatkın oldukları, akut batın nedeni olabilecekleri ve nadir de olsa malign farklılaşma gösterebilecekleri akılda tutulmalıdır.

Anahtar Kelimeler: Akut batın, Neoplazm, Over, Teratom

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