Letter to Editor

Primary Malignant Mixed Müllerian Tumor of the Fimbriated End of the Fallopian Tube Causing Hematosalpinx and Hematometra

Dear Editor,

Primary fallopian tube malignancies are one of the rarest tumors of female genital tract.[1,2] Tubal sarcomas, particularly malignant mixed müllerian tumors (MMMT) are extremely rare forms of fallopian tube malignancies. Most of the patients are postmenopausal, the mean age is 57.5 years,[2] and usually advanced at the time of application. Generally, like the epithelial ovarian cancers, cytoreductive surgery to remove all of the tumor and its metastases is possible and platinum-based chemotherapy is done. But unfortunately, prognosis is poor.[3] Usually, the patients have nonspecific abdominal distention, pain or watery/bloody vaginal discharge.[2,4] If the tumor is located on the fimbriated end of the fallopian tube, watery/bloody vaginal discharge may emerge.[5] We report a case of primary MMMT located on the distal tubal region.

A 64-year-old, woman was referred to our clinic due to new onset of watery/bloody vaginal discharge and lower quadrant abdominal pain. She had a 12 × 10 × 8.5-cm heterogeneous left tuboovarian mass and approximately 7-cm intracavitary fluid collection in uterus detected by abdominal ultrasonography (US). On physical examination, she had a palpable mass in the midline and lower quadrant. Transvaginal US and magnetic resonance imaging determined approximately 14-cm length and 4-5-cm width tubulocystic mass including hemorrhagic components. In addition, at the distal end of this structure, approximately 6-cm heterogeneous solid mass was determined [Figure 1]. Initial complete blood count, liver, and kidney function tests were normal. The preoperative carcinoembriogenic antigen, alpha-fetoprotein, human chorionic gonadotropin and CA-125 levels were in the normal range. Because of intracavitary fluid collection, endometrial tissue sampling was done. The results were reported as adenocarcinoma. Papanicolaou smear was negative. In the light of the findings, the patient underwent cytoreductive surgery. During the operation, left tubal mass of 14 cm length was seen. The mass was adherent to the adjacent pelvic structures tightly. Other intraabdominal organs were grossly normal. In addition, hematogenous fluid (approximately 100 mL) was stand out in abdomen. After the cytologic sampling of the fluid, mass resection was performed. The tubal mass contained hematoma areas and a solid area of 6 cm at the distal end. After that, right unilateral salpingo-oophorectomy, left oophorectomy, hysterectomy, omentectomy, and pelvic-paraaortic lymphadenectomy were performed. Biopsies were taken from suspicious intestinal serosa and peritoneal areas. Appendectomy was done 30 years ago. The final pathologic diagnosis was MMMT [Figure 2], and cytologic sampling of the fluid was reported as malignant cytology. All lymph nodes, omentum, and biopsies were negative for cancer. Thus, the patient was categorized as International Federation of Gynecology and Obstetrics FIGO Stage IIc and 1 month after the operation, six cycles of paclitaxel (taxol, 175 mg/m^2) followed by carboplatin (AUC 5) administered at 3-week intervals. She is now doing well without any recurrence 15 months after the surgery.

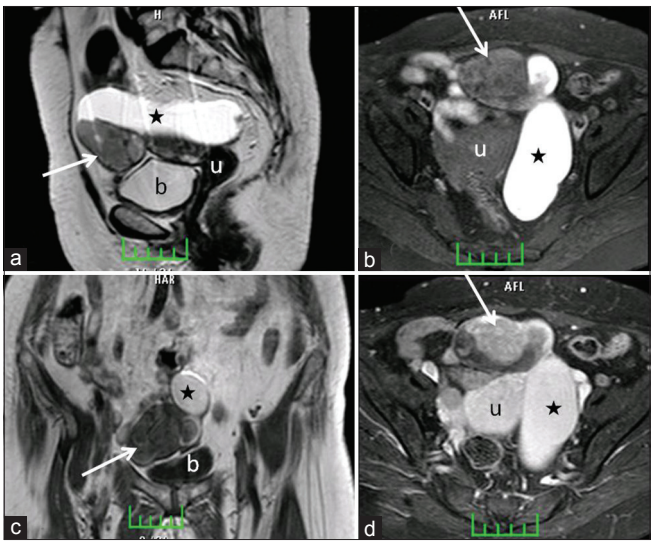

Figure 1: Pelvic MR images of the patient: (a) sagittal T2 weighted (T2W) magnetic resonance imaging (MRI); (b) coronal T1 weighted (T1W) MRI; (c) axial fat-suppressed T1W MRI; (d) axial fat-suppressed contrast-enhanced T1W MRI. MR imaging reveals that the fallopian tube (asterix) is filled with blood, as the content is hyperintens on both T1 and T2W images and shows no signal loss on fat-suppressed series. The soft tissue mass on the distal end of the tube (arrow) is of intermediate intensity on T1 and T2W images and strongly enhances after contrast material administration. u: Uterus; b: Bladder

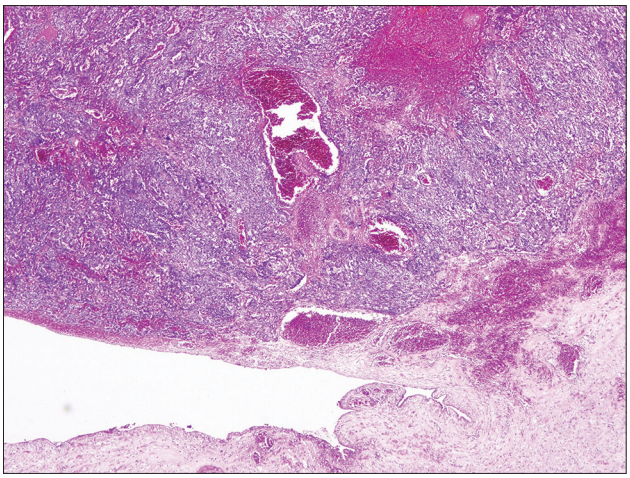

Figure 2: Bleeding necrotic tumor formation developing into the tuba lumen (H and E, ×20)

MMMTs of fallopian tube are uncommon neoplasms, with the first case being reported in 1970.[6] Although prognosis is poor in a way, lower incidence of advanced disease is seen in these patients than in patients with epithelial ovarian carcinomas, presumably because of the earlier occurrence of symptoms, particularly vaginal bleeding or unusual vaginal discharge.[7] As known, most important prognostic factor is spread of the tumor at diagnosis. Indeed, because of the prominent watery/bloody vaginal discharge, our patient was categorized as FIGO Stage IIc during the diagnosis.

Because of the aggressive nature of this kind of sarcomas, a complete surgical staging and pathological classifications is very important. In addition, only half of the reported events till now have heterologous components.[8] More importantly, the number of patients who have heterologous components and also have tumor in the fimbriated end are less than 10.[5,9] In our case, the heterologous component has been reported as chondrosarcoma and there was a 6-cm mass at the fimbriated end.

As was mentioned in many studies, cytoreductive surgery followed by platinum-based chemotherapy could be an effective treatment for MMMT of the fallopian tube.[3,9] Kawaguchi *et al*.[9] demonstrated that paclitaxel and carboplatin therapy reduced the size of a measurable tumor effectively in their patient with MMMT of the fallopian tube. In addition, radical surgery followed by chemo/radiotherapy could be an alternative and effective treatment for adenosarcoma of the cervix or pouch of Douglas location.[10,11]

In the differential diagnosis of a hematosalpinx and hematometra, the disease is not seen much in that age group. As is known, even hematometra is mostly related with an imperforate hymen, a patient with hematosalpinx suggests a rarely seen pathology, i.e., tubal endometriosis. Endometrial implants involve the fallopian tubes in 6% of women with endometriosis, and adhesions involve the salpinges (26%).[12] However, endometriosis is not found in this age group, suggests malignancy first.

As in our patient, presence of a rare tumor type of tuba at the fimbrial end has caused hematosalpinx and hematometra and as a result, bloody/watery vaginal discharge happened. So, a relatively early-stage diagnosis is thought to make a positive contribution to the prognosis. Based on these findings, the patients presenting watery/bloody discharge, especially during postmenopausal period may have tubal tumor that may cause distal tubal obstruction.

Dagistan Tolga Arioz, Sezgin Yilmaz[1], Nazan Okur[2], Fatma Aktepe[3], Mehmet Yilmazer, Sinan Ozalp[4]

Departments of Obstetrics and Gynecology, [1]Surgery, [2]Radiology, and [3]Pathology, Afyon Kocatepe University, Medical School, Afyonkarahisa, [4]Osmangazi University, Medical School, Eskisehir, Turkey.
E-mail: dagistantolgaarioz@yahoo.com

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