

Case Report

Case report: Occurrence of fallopian tube cancer in a patient with previous history of estrogen receptor positive breast cancer

Christopher Chung¹, Michelle Lee¹, Peiguo Chu², Yun Yen^{1,*}

¹ Department of Clinical and Molecular Pharmacology, City of Hope National Medical Center; Duarte, CA, USA;

² Department of Pathology, City of Hope National Medical Center; Duarte, CA, USA.

Summary

Fallopian tube cancer is very rare, it accounts less than 1% of all genital tract cancer in women. The annual incidence is 3.6 per million women per year. The vast majority of fallopian tube cancers are papillary serous adenocarcinomas. Most women with fallopian tube cancer are usually diagnosed at age 50s to 60s. Vaginal bleeding or discharge is the most common presentation. We would like to present a case in which fallopian tube cancer was diagnosed in a patient with post menopausal bleeding, abnormal ultrasound finding and history of estrogen receptor (ER) positive breast cancer.

Keywords: Fallopian tube cancer, estrogen receptor (ER) positive breast cancer

1. Introduction

Fallopian tube cancer is very rare and it accounts less than 1% of all genital tract cancer in women. Metastatic cancer to fallopian tube from ovary, uterus, breast and gastrointestinal tract is more common. Most women with fallopian tube cancer are usually diagnosed at age 50s to 60s. Vaginal bleeding or discharge is the most common presentation, other symptoms include pelvic pain and mass. Inherited BRCA mutation is an important risk factor for fallopian tube cancer. We would like to present a case in which fallopian tube cancer was diagnosed in a patient with post menopausal bleeding, abnormal ultrasound finding and history of estrogen receptor (ER) positive breast cancer.

2. Case report

The patient is a 56 year-old Caucasian women who had history of ER positive breast cancer, status post bilateral mastectomy and chemotherapy 2 years ago. Menopause was at age 51. She presented to gynecology clinic with a few weeks of post menopausal spotting.

Endometrial biopsy was performed and the pathology report showed benign endometrium. Pelvic ultrasound revealed 5 cm complex right adnexal mass. The patient was then referred to gynecologic oncology service and underwent surgery. Frozen section of the right tube and ovary revealed fallopian tube cancer. Total abdominal hysterectomy, bilateral salpingo-oophorectomy and surgical staging were then performed. The final pathology showed a high grade primary right fallopian tube serous adenocarcinoma (Figure 1) with no evidence of metastasis. Patient received no further treatment but follow up.

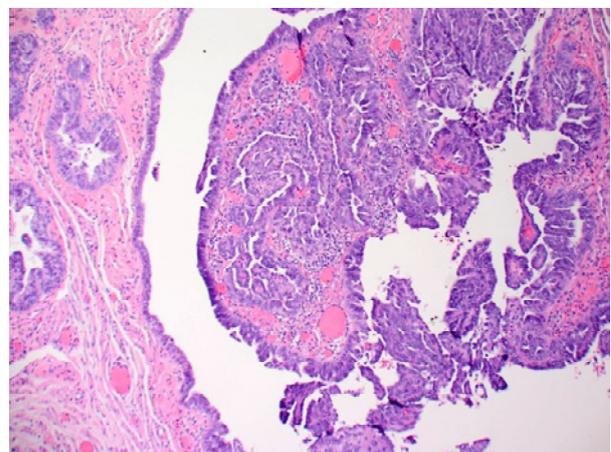


Figure 1. Serous adenocarcinoma with typical moderate to poorly differentiated solid nests of cells. The cells demonstrated proliferative, nuclear atypia, and mitotic figures. $\times 100$.

*Address correspondence to:

Dr. Yun Yen, Department of Clinical and Molecular Pharmacology, City of Hope National Medical Center, 1500 East Duarte Road, Duarte, CA 91010, USA.
e-mail: yyen@coh.org

3. Discussion

Fallopian tube cancer is very rare, it accounts less than 1% of all genital tract cancer in women. The classical triad of symptoms are watery vaginal discharge, pelvic mass and pelvic pain. However, most patients do not present with these symptoms. In our patient, she presented with postmenopausal bleeding, and pelvic ultrasound revealed complex right adnexal mass. The interesting part of our patient was that she had history of ER positive breast cancer.

Even though the causes of fallopian tube cancer have not been extensively studied, it has been reported that this cancer is associated with chronic tubal inflammation, infertility, tuberculous salpingitis, and tubal endometriosis (1,2). Cytogenetic studies have also shown that this disease is associated with the overexpression or alternation of p53 (81%), HER2/neu (89%), c-myc (61%), and serum CA 125 expression profiles (2).

Inherited BRCA mutation is an important risk factor for fallopian tube cancer. The incidence of fallopian tube cancer increases 120-fold in BRCA1 mutation carriers when compared with Surveillance, Epidemiology, and End Results (SEER) (1). In addition, a study in Ontario, Canada showed a modest increase in the risk of ovarian cancer (relative risk (RR) = 2.2) and of early-onset breast cancer (RR = 2.4) was observed in the first-degree relatives of the fallopian cancer cases (3). 11% were positive for a mutation in BRCA1 and 5%

were positive for a BRCA2 mutation (3). In our case, although we do not have the BRCA status of our patient, she did present with ER positive breast cancer followed by the diagnosis of fallopian tube cancer a few years later. We hope, through this case report, to raise the awareness of the possible association of breast cancer and other genital tract cancer such as fallopian tube cancer. Any patient with history of breast cancer and abnormal vaginal bleeding needs further evaluation of possible genital tract cancers. Similarly, the diagnosis of fallopian tube cancer should warrant further evaluation of possible clinical component of the hereditary breast-ovarian cancer syndrome which may be associated with BRCA1 and BRCA2 mutations.

References

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