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Case report

Primary fallopian tube carcinoma discovered by mistake – A case report



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ARTICLE INFO

Article history:

Received 26 October 2015

Received in revised form
15 November 2015

Accepted 21 January 2016

Available online 26 February 2016

Keywords:

Ca-125

Fallopian tube carcinoma

Metastases

Ovarian cancer

Paraaortic lymph nodes

ABSTRACT

Introduction: Fallopian tube carcinoma is a rare neoplasm derived from mucous tissue located inside fallopian tubes. The disease is most prevalent in women in 4th to 6th decade. The early stages are asymptomatic, advanced stages can be diagnosed based on Latzko's triad: serous, amber-colored discharges, pathological resistance during abdominal physical examination, colic abdominal pain alleviating when the discharge is released.

Aim: To present a case of an uncommon neoplasm found by mistake.

Case study: We present a case of a 60-year-old asymptomatic woman admitted to gynecological-oncological department with a suspicion of a neoplasm in the left ovarian cyst. The surgery performed excluded the possibility of malignancy of the ovary, but the histopathological examination afterwards revealed the presence of a high-grade serous carcinoma in the right fallopian tube. In CT imaging enlarged, paraaortic lymph nodes were revealed. The patient underwent a surgery and received postoperative adjuvant chemotherapy.

Results and discussion: The fallopian tube cancer may be related to ovarian cancer. It can be found on one side or bilaterally. There is a need for further diagnostic proceedings in order to confirm diagnosis and to select optimal treatment. Main negative prognostic factors are stage and the lack of optimal cytoreduction. Depending on the staging appropriate treatment is chosen with surgery being the basic procedure. Adjuvant chemotherapy is used. Radiotherapy is only justified as a palliative procedure.

Conclusions: The fallopian tube carcinoma is often found either during or after the surgery. The optimal treatment is the excision of the reproductive organs with lymphadenectomy.

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1. Introduction

Fallopian tube carcinoma (FTC) is a rare neoplasm derived from mucous tissue located inside fallopian tubes.¹⁻³ Only 20% of FTCs origin in fallopian tubes (primary fallopian tube carcinoma – PFTC), the rest is caused by ovarian, endometrial, digestive tract and breast metastases.^{4,5} The disease is most prevalent in women in 4th to 6th decade with a median age of 55.³ Genetic, hormonal and reproductive factors are believed to play a significant role in pathogenesis of PFTC and they are similar to ovarian carcinoma factors. There is also a documented connection to germ-line BRCA1 and BRCA2 mutations.^{6,7} The disease is most often found during a gynecological operation or an abdominal surgery.^{1,3} The lesions containing this tumor are visible to eyes and are the initiators of the following diagnostic process.

2. Aim

The aim of this study is to present an unusual clinical case of a FTC. There is not much literature concerning FTC. Cases presented most often describe common moment of diagnosis, which is intraoperative diagnosis. The one presented in this study differs from the rest and stresses the importance of oncological vigilance and the fact that one disease does not exclude the existence of another.

3. Case study

We present a case of a 60-year-old woman admitted to gynecological–oncological department due to a neoplasm suspicion. Patient had no earlier signs or symptoms. Menarche at the age of 12, periods were regular every 30 days, lasting 3–4 days, of mediocre intensification and painfulness. Last period was at the age of 54. Patient has denies additional bleedings. Patient was pregnant 3 times, had 3 parturitions, 1 via the vaginal route, 2 with a caesarean section, all parturitions were premature. Last birth was 35 years before. Patient also suffered from osteoarthritis of lumbar part of the spine. Patient chronically takes valsartan, amlodipine. She has also an oncological family history: first sister had a breast neoplasm at the age of 63 and second sister had a thyroid neoplasm at the age of 40. In present patient has a deskwork, is of secondary education.

In March of 2014 the patient was diagnosed a cyst of the left ovary leading to a resection of the ovaries and uterus. Intraoperative examination excluded the possibility of malignancy in the left ovary (including the existence of a metastatic tumor⁸). After the operation, samples of the excised organs were taken and were examined histopathologically. The tests revealed a presence of a high-grade serous carcinoma of the right fallopian tube, there were also carcinomatous vessel embolisms as well as a creamy infiltration nearby fallopian tube hyphae (1.5 × 1.0 × 0.8 cm) found. Because that latter neoplasm was diagnosed by accident, there was a need of further examination of a patient in search of metastases. In the computer tomography (CT) scan (Fig. 1) of

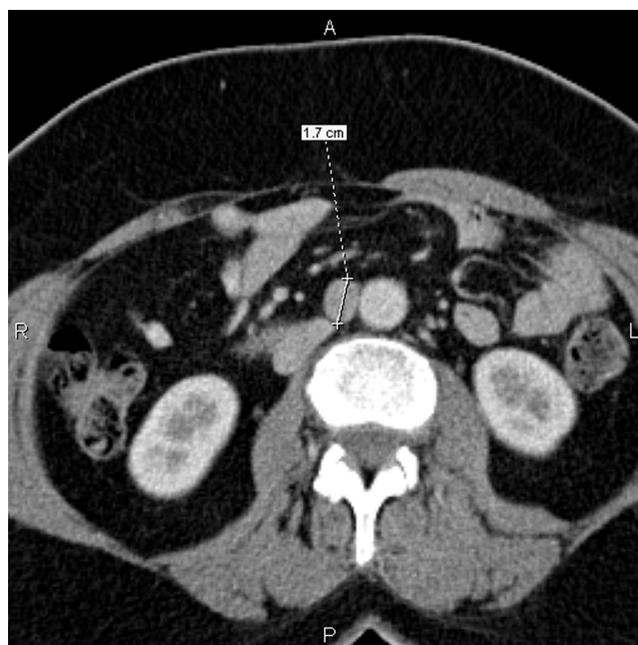


Fig. 1 – Enlarged paraaortic lymph node at computed tomography scan.

the abdomen there was an enlargement (4.0 × 1.7 cm) of paraaortic lymph nodes revealed beneath right renal vessels – stage FIGO III. Biochemical tests results were correct with Ca-125 on the verge of normality.

There has been a surgery performed (Fig. 2). Greater omentum, cervix of the uterus, and metastatic paraaortic lymph nodes (4 cm in diameter) were excised (Fig. 3). During the surgery samples from the omentum and swabs from the diaphragm were taken, iliac lymph nodes biopsy was performed. As a side effect a bladder damage occurred. A catheter has been set up in the urinary bladder for 14 days.

Patient was released in good overall condition after 17 days of hospitalization with recommendation to take dalteparine injections, furasidine orally and estriol vaginally. Histopathological examination of the paraaortic lymph nodes showed metastases: *adenocarcinoma serosum lymphonoduli* (Figs. 4 and 5). The rest of the excised organs showed no neoplastic abnormalities. According to WHO standards III stage was diagnosed.

After leaving the hospital, patient underwent six courses of chemotherapy at an interval of 21 days. The chemotherapy consisted of platine derivatives and taxane.

4. Results and discussion

PFTC is a rare disease occurring commonly to women in 4th to 6th decade.^{1,3} However, if there is a germ-line BRCA1 and BRCA2 mutation linkage, the disease may occur 10 years earlier and the occurrence in such a group is 120 times greater with BRCA1 mutation being more common. As mentioned before, there are genetic, hormonal and reproductive factors that are important in pathogenesis of both PFTC and ovarian carcinoma.³ Moreover it is believed, that those two carcinomas share similar genetic,

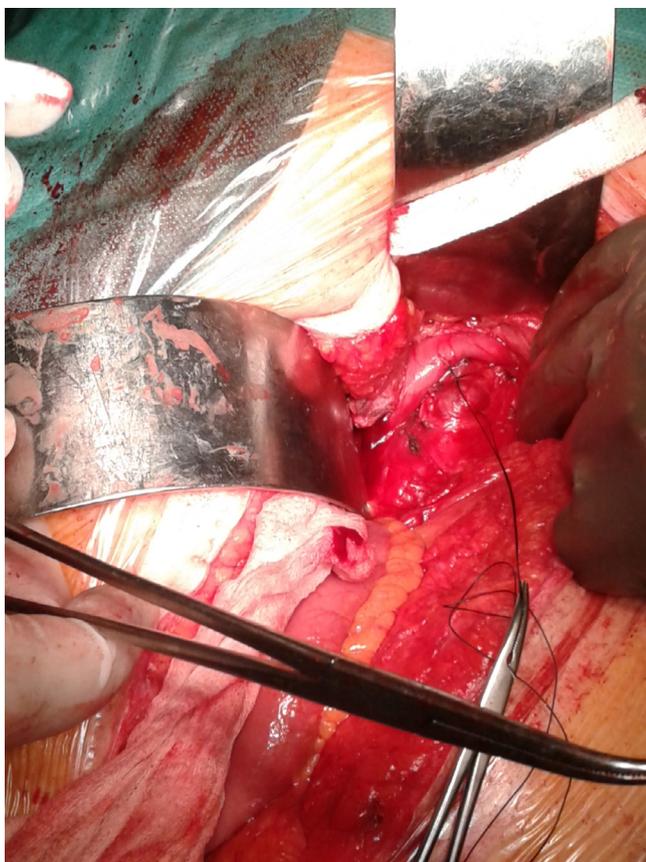


Fig. 2 – Enlarged paraaortic lymph node during surgery.

biological and clinical features.⁹ Therefore, there are analogical risk factors among PFTC and ovarian cancer such as pregnancy, proliferation, use of contraceptives.³

However, in comparison to ovarian cancer, there is a greater tendency to disseminate to retroperitoneal space and the occurrence of distant metastases. PFTC spreads lymphatically (in 33% of cases there are paraaortic lymph nodes seized

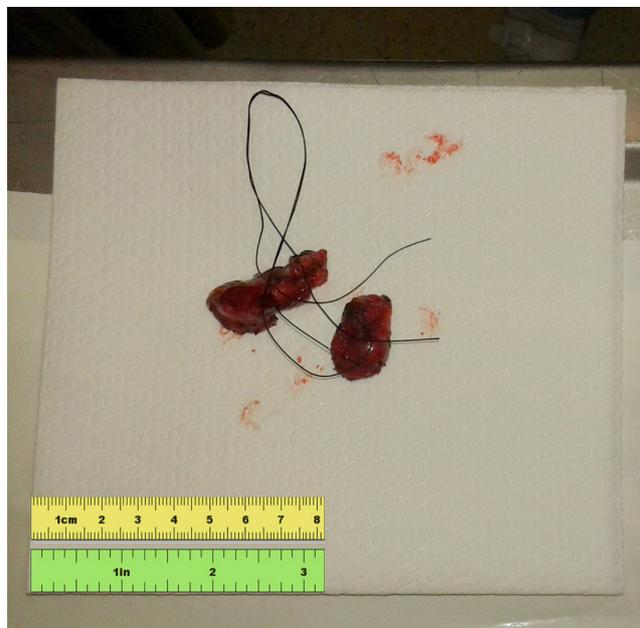


Fig. 3 – Excised paraaortic lymph nodes.

by a cancer) as shown in this case, with a bloodstream and through intraperitoneal dissemination.³

It may occur bilaterally. Distal part of the fallopian tube is a place where serous tubal intraepithelial carcinoma (STIC) situates. It is believed to be a precursor of a poorly differentiated ovarian cancer. However in the presented case, there is no such correlation, since the lesions were on the opposite sides and the cyst of the left ovary was not malignant.

Early stages of the disease are asymptomatic. More advanced stages may manifest as improper bleeding from reproductive tract, ascites, watery or abundant vaginal discharges, pathological resistance during abdominal physical examination, colic abdominal pain alleviating when the discharge is released. The last three symptoms (with discharges being serous, amber-colored) are also known as

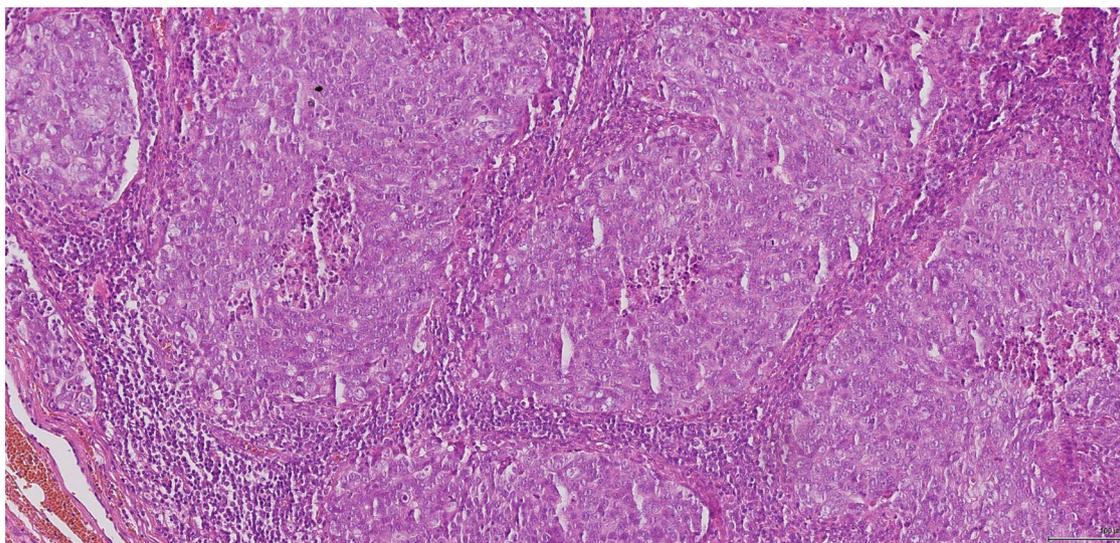


Fig. 4 – Metastatic high-grade serous carcinoma in the paraaortic lymph node (HE, magnification 200×).

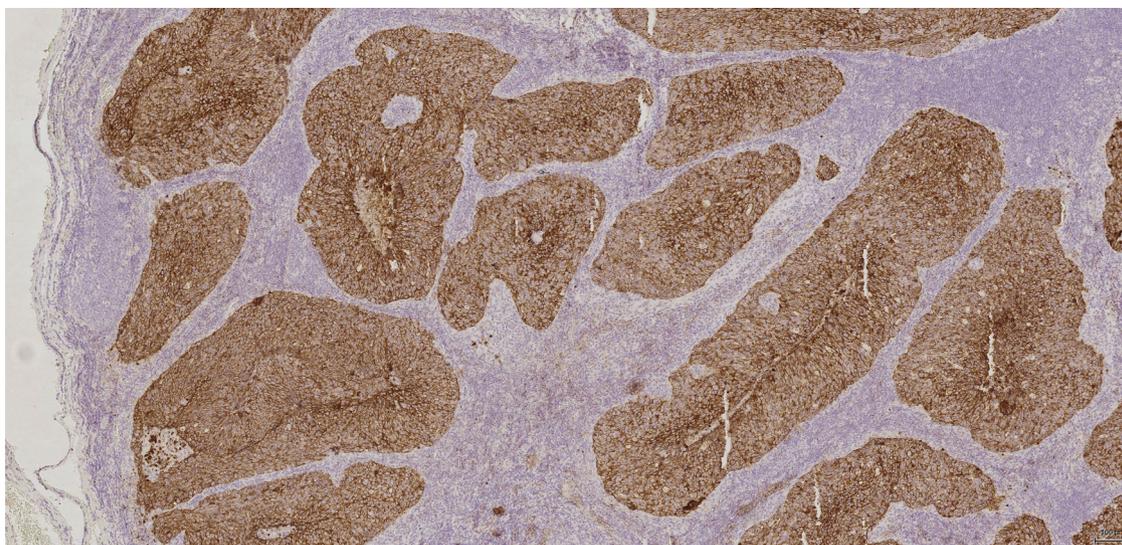


Fig. 5 – The tumor cells show a strong immunoreactivity for cytokeratin (cytokeratin, magnification 100×).

Latzko's triad. These symptoms are absent in case presented, since the neoplasm was of a low stage.

When diagnosing PFTC there is a need to conduct further examination, since only 50% of patients present typical symptoms. Among diagnostic methods, the most important are ultrasonographic imaging (sausage shaped mass), cytological examination and concentration of CA-125. It is often helpful to use a Doppler ultrasonographic method when neoplastic characteristics of a tumor have been found. In 0%–23% of women with fallopian tube carcinoma there is an abnormal cytologic smear according to Papanicolaou. In the case presented cytologic examination was of a II group. Elevated levels of Ca-125 are found in over 80% of patients, especially in higher stages. Ca-125 is an independent prognostic factor of recurrence-free time and overall life expectancy. It can also be used to monitor response to treatment.^{3,9} The elevation of said marker precedes the recurrence or the occurrence of clinical and radiological symptoms by approximately three months. The recurrence is observed in first three years of elevated Ca-125. Metastases most often occur outside the pelvis, in greater omentum, breast and pericardium.^{4,5}

The negative prognostic factor is stage and the lack of optimal cytoreduction (minimal residual disease over 2 cm). Other prognostic factors are intraoperative fracture of the tumor, histologic type (serous or clear cell), the invasion of lymph vessels, presence of neoplastic cells in peritoneal lavage, high preoperative Ca-125, advanced age and HER-2, p-53 overexpression.^{1-3,10}

The treatment of PFTC is in relation to staging, nonetheless there is always a need to perform a surgery. In Wethington et al. better results were observed in patients with a higher stage. The scope of the operation depends mostly on the age of a patient.¹¹ Sparing operation can be performed when a woman is in procreative age and involves the excision of affected fallopian tube. Otherwise, after menopause the operation involves the excision of the ovaries, uterus, the greater omentum together with pelvic and paraaortic lymph nodes. Such a procedure has a positive effect on prolonging the

mean life expectancy – 43 months with lymph nodes excised vs. 21 months with the excision.¹¹

In an adjuvant therapy, chemotherapy is used. Radiotherapy, however, is not justified as an adjuvant therapy and is therefore not recommended. It can be used only as a palliative treatment or in a topical, non-operable relapse. Whether or not hormonal therapy should be applied is unknown, since there have been no results of such studies published. Therapeutic process in the case presented varies from the one described, since the neoplasm was found incidentally and therefore there was a need for an additional TK examination of the abdomen and reoperation of suspected lymph nodes. Based on staging,³ the patient had a chemotherapy applied.³ Five-year life expectancy of patients is varying from 44% to 59%.¹²

5. Conclusions

The diagnosis of a fallopian tube carcinoma is made most often either during an operation or after histopathological examination of the postoperative material. The neoplasm often metastasizes lymphatically to paraaortic lymph nodes. One of the most important prognostic factors is, apart from staging, the optimal cytoreduction along with the excision of reproductive organ and lymph nodes.

Conflict of interest

The authors have no conflicts of interest relevant to this article.

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