

PRIMARY SEROUS PAPILLARY ADENOCARCINOMA OF THE FALLOPIAN TUBE

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SUMMARY – Fallopian tube cancer is least common of all gynecologic tumors, with the mean age at onset between 54 and 63 years. This case report presents a 67-year-old female, gravida 1, para 1, with primary adenocarcinoma of the fallopian tube, detected and diagnosed preoperatively in clinical stage IIIc. The patient was asymptomatic, with only mild vaginal discharge of amber color and normal measured value of CA 125. The diagnosis was based on routine clinical and ultrasound examination, followed by surgery, surgical-pathological staging of the disease, and finally paclitaxel and platinum based chemotherapy. The patient has been in remission for nine years now.

Key words: *Fallopian tube neoplasms – diagnosis; Fallopian tube neoplasms – surgery; Adenocarcinoma, papillary – diagnosis; Adenocarcinoma, papillary – surgery; Case report*

Introduction

Fallopian tube cancer is least common of all gynecologic tumors, accounting for only 0.1% to 0.4% of all gynecologic tumors. The reported incidence ranges from 0.29 to 0.36/100 000. The mean age at onset is between 54 and 63 years¹. The etiology of the fallopian tube cancer is unknown, although infertility, hormonal and genetic factors are considered as the possible causative factors². Mutations of the BRCA1 gene were found in 16%-34% of women with primary fallopian tube cancer³. The risk is lower in women on oral hormonal contraceptives and in pluriparous breastfeeding women. Nulliparous women have better prognosis than pluriparous women, although plurality is considered as a protective factor².

Clinical manifestations of the disease are lower abdominal pain, amber vaginal discharge (which ap-

pears in 29% of patients) and pelvic masses (adnexal tumor occurs in 26% of all cases), i.e. Latzko's triad^{4,5}. The level of CA 125 can be elevated in 59%-100% of patients, but it is not considered specific for cancer of the fallopian tube⁴. In more than 90% of cases, these tumors histologically belong to the group of serous adenocarcinoma².

Due to clinical, therapeutic and prognostic similarities with ovarian cancer in staging, a modified classification for ovarian cancer is used. Staging is done according to surgical-pathological classification provided by FIGO⁶.

Fallopian tube cancer spreads mainly transcoelomically, similar to ovarian cancer, and *per continuitatem* to the adjacent structures, ovaries and uterus⁴. Lymphatic metastases are usually found in pelvic and para-aortic lymph nodes. The most commonly affected group of lymph nodes are those belonging to the inferior mesenteric artery⁷. According to the literature, lymph nodes were positive in 36% to 55% of patients that underwent lymphadenectomy⁸. Surgical treatment is intended primarily for early stages of fallopian tube cancer⁵.

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Received July 1, 2013, accepted December 12, 2013

External irradiation, intraperitoneal applications of isotopes, vaginal and uterine radioactive implants are the possible ways of radiotherapy⁵. Out of the total number of patients with fallopian tube cancer, up to 43% have signs of peritoneal tumor invasion and approximately 30% have para-aortic lymph nodes positive for metastasis⁷. Therefore, as in cases of ovarian cancer, the recommended chemotherapy protocols are based on platinum and paclitaxel⁹.

Survival rate depends on the stage of the disease, tumor maturity (grade), invasion of the muscular layer of the tuba, lymphovascular space involvement, and presence of inflammatory reactions⁷. Five-year survival rate for stage I is 95%, stage II 75%, stage III 69%, and stage IV 45%². In general, fallopian tube cancer has better prognosis than ovarian cancer³.

Case Report

A patient aged 67, gravida 1, para 1, postmenopausal for 15 years, without a history of oral contraceptive use or hormone replacement therapy, was admitted to the Clinical Department of Gynecology and Obstetrics, Osijek University Hospital Center. On regular gynecologic examination, a small cylindrical tumor mass was detected, located in the left adnexal area, immobile and tender to deep palpation. The patient complained only of 'yellowish mucous' vaginal discharge. Papanicolaou test was taken, but it was negative for malignancies.

Ultrasound revealed uterus of normal size and endometrium divided with liquid measuring 13 mm (mucometra). Left ovary was converted to anechogenic cyst measuring 59x65 mm, smooth-walled, without papillae or septa, with poorly vascularized capsule, and with normal color Doppler Resistance Index (RI). Above the cystic formation, a solid cylinder shaped tumor, 15 cm long and 3 to 5 cm wide, abundantly vascularized with pathologic color Doppler RI measuring between 0.34 and 0.39, was detected. CA 125 level was 31.1 IU/mL.

A decision was made to perform laparotomy in order to make complete evaluation. Laparotomy revealed normal uterus with left ovary that was turned into a cystic mass and left tuba turned into a tumor formation consisting mainly of solid material that was stretched between the uterus, cavum douglasi, rectum



Fig. 1. Primary serous papillary adenocarcinoma of the fallopian tube.

and pelvic side wall. Tubal ostia were covered with a cauliflower-like abdominal tumor (Fig. 1).

Since there was no ascites present, peritoneal lavage was performed. Cytologic examination revealed that there were no malignant cells present. This limited the operation to hysterectomy with adnexectomy, omentectomy, multiple biopsies of the peritoneum, pelvic and para-aortic lymph node sampling, with necessary adhesiolysis of the tumor and surrounding structures. Histopathologic examination showed a tumor of the fallopian tube measuring 15x10 cm, enormously enlarging the tuba that was filled with

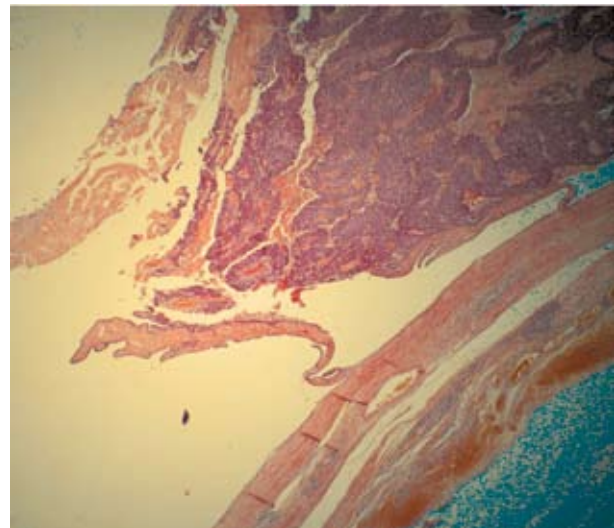


Fig. 2. Transition from benign to malignant epithelium of the fallopian tube.

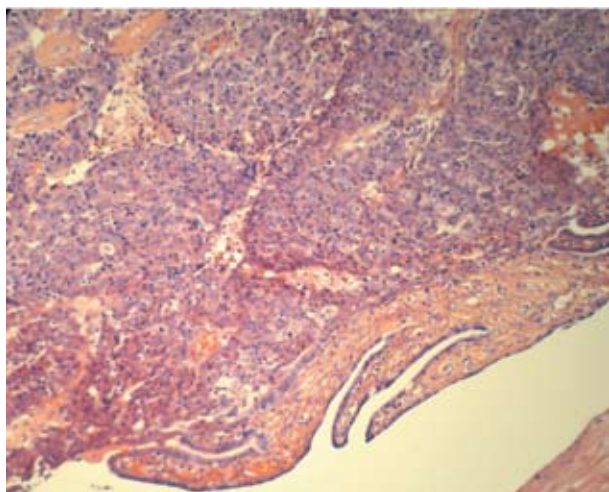


Fig. 3. Histopathologic image of the fallopian tube tumor.

solid tumor formations composed of clusters of highly atypical epithelial cells with low differentiation, polymorphism and mitosis (Figs. 2 and 3). The tumor, although poorly differentiated, still mimicked the structure of the fallopian tube. The omentum had normal histologic structure without any metastasis present; however, tumor tissue was found in two of 19 lymph nodes removed from the lymph nodes belonging to the area of the common iliac artery. Tumor cells were also found in the tissue removed from serosa of the rectosigmoid colon.

The patient's postoperative course was uneventful. Adjuvant polychemotherapy based on paclitaxel and carboplatin was administered, for the duration of six cycles. The patient has been regularly followed up for the past nine years at our gynecologic oncology department, and has been free from any signs of the disease.

Discussion

This case report presents a patient with gynecologic tumors, found at the surgical-pathological FIGO stage IIIc using appropriate diagnostic procedure and correct surgical staging. Except for the 'yellowish' vaginal discharge, the patient had no other symptoms of the disease, although it was in an advanced stage. According to the literature, 20% of patients were asymptomatic, and only 3% were correctly diagnosed preoperatively¹. The specific amber vaginal discharge, which is present in more than 50% of the patients, has a predictive value of 11%-60% for abnormal cytologic

findings⁸. CA 125 level may be higher in 59%-100% of patients, but it is not specific for cancer of the fallopian tube¹⁰.

In comparison with similar cases^{10,11}, this patient belongs to the group of most common histologic subtype (serous adenocarcinoma, 56%) and stage (stage III, 39%). However, according to the literature, the median follow up was 39.6 months and overall survival rate 34%⁹.

According to ultrasound criteria previously described by Kurjak *et al.*¹², the finding of a large highly vascularized solid tumor mass, usually within the fallopian tube, especially when associated with pathologic values of the color Doppler RI, can with high probability lead to the diagnosis of a primary tumor of the fallopian tube. In this case, the diagnosis of simple ovarian cyst was also helpful. Since this was the case of advanced cancer, the pathologist had no difficulty in making the diagnosis of primary fallopian tube cancer.

In the initial stages of the disease, the following four criteria as modified by Sedlis¹³ in 1978 should be met to set the histologic diagnosis of primary fallopian tube cancer: the tumor arises from the endosalpinx; the histologic pattern reproduces the epithelium of the tubal mucosa; transition from benign to malignant epithelium; and the ovaries are either normal or with a tumor smaller than that of the tube.

Tubal carcinoma spreads mainly transcoelomically, but in this case the spread was *per continuitatem* to the rectosigmoid bowel and pelvic side wall, with lymphatic spread to the parailiac lymph nodes, even though, according to the literature, most commonly affected are lymph nodes around the inferior mesenteric artery⁷. Although there are no strict diagnostic and therapeutic guidelines, fallopian tube cancer diagnosis should be based on typical clinical signs, transvaginal ultrasound and pulsating color Doppler; CA 125 and the finding of malignant cells in the amber vaginal discharge can also be useful^{4,10}. In some cases, malignant cells can be found in cervical Pap smear, as reported in the literature¹⁴. Therapy should be primarily surgical and it should be based on exact surgical-pathological staging, followed by adjuvant chemotherapy based on paclitaxel and platinum. In advanced stages, an optimal cytoreduction and chemotherapy are an option¹⁵.

By following the principles in this case, the patient with advanced primary carcinoma of the fallopian tube has managed to survive free from recurrences for nine years after initial treatment.

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Sažetak

PRIMARNI SEROZNI PAPILARNI ADENOKARCINOM JAJOVODA

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Rak jajovoda je najrjeđi među svim ginekološkim tumorima s najvećom incidencijom u dobnj skupini od 54 do 63 godine. Rad prikazuje primarni adenokarcinom jajovoda kod 67-godišnje bolesnice, gravida 1, para 1, otkriven i prijeoperacijski dijagnostičiran u kliničkom stadiju IIIc. Bolesnica je bila asimptomatska, a jedini simptom je bio blagi vaginalni iscjedak jantarne boje, uz uredne izmjerene vrijednosti CA 125. Dijagnoza se temeljila na kliničkom pregledu i ultrazvučnoj dijagnostici, nakon čega je potvrđena perioperacijski, kroz kirurško-patološko određivanje stupnja proširenosti. Nakon operacijskog zahvata bolesnica je podvrgnuta kemoterapiji zasnovanoj na paklitakselu i platini. Bolesnica se devet godina nalazi u remisiji.

Ključne riječi: *Tuba uterina, tumori – dijagnostika; Tuba uterina, tumori – kirurgija; Adenokarcinom, papilarni – dijagnostika; Adenokarcinom, papilarni – kirurgija; Prikaz slučaja*