CASE REPORT

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Primary Carcinoma of Fallopian Tube: Analysis of Two Cases Requiring Colectomy with Different Referral Symptoms

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ABSTRACT Primary fallopian tube cancer (PFTC) is a rare gynecological malignancy. PFTC can be diagnosed by surgery performed for another reasons. We report two cases of PFTC presenting with different referral symptoms. Both patients were postmenopausal. PFTC was detected after surgery for pelvic relaxation in one case, and after surgery for peritoneal carcinomotosis in the other. The distinction between PFTC and ovarian cancer (OC) is difficult because of the similarity of tumor presentations and histologies. As well as the histopathological similarities, treatment protocols of PFTC and OC are similar. Cytoreductive surgery is preferred in both diseases. Therefore in our cases colectomy besides the complete surgical staging were performed to achieve optimal debulking.

Keywords: Primary; fallopian tube; carcinoma

Primary fallopian tube cancer (PFTC) is a rare gynecological malignancy. It accounts for 0.14-1.8% of all gynecological cancers.[1] Preoperative diagnosis is difficult because of the non-specificity of the referral symptoms.[2] There is no obvious symptom. Vaginal bleeding is the most common symptom. Bleeding is seen through the uterus from the tubal tumor. Since about half of the patients are postmenopausal, one of the most common symptoms is postmenopausal bleeding. Abdominal swelling and ascites may be seen in some patients. Because the tube carcinoma usually spreads very quickly, early diagnosis is very rare. Early diagnosis can only be done by surgery performed for another reasons.[3]

Peritoneal, ovarian or tubal serous carcinomas are thought to be histologically and morphologically identical.[4] Due to its clinical and histological similarity to ovarian carcinomas (OC) and the fact that it cannot always be clearly distinguished from OC, tube cancers are managed as OC at the present time. Here, we report two cases of PFTC presenting with different complaints on admission.

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CASE 1

A 70 year-old patient with 9 vaginal births was admitted to the gynecology clinic with complaints of pelvic relaxation. Her last menstrual period was 16 years ago. Her medical history included hypertension and diabetes mellitus. Grade 4 desensus and Grade 3 systorectocele were detected on pelvic examination. Ultrasonographic evaluation revealed atrophic endometrium and uterus, neither adnexal pathology nor pelvic free fluid. Pap-smear was malignancy negative. Laboratory findings including tumor markers were within normal limits. The patient underwent vaginal hysterectomy, left unilateral salphingo-

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oophorectomy, right salpingectomy and was discharged without any complications in the postoperative period. The final pathology report was reported as fimbrial local invasive high grade serous carcinoma (HGSC) in the right fallopian tube. The patient was scheduled for complementary cytoreduction. Upon the patient's refusal of medical and surgical treatment, she was followed up. Approximately nine months after the first operation omental cake, peritoneal implantations and paraaortic enlarged lymph nodes were detected on computed tomography (CT). At that time, her CA 125 value was 145 U/mL. So the patient received complementary surgery. Intraoperatively omental cake, diffuse peritoneal and intestinal implants were seen. Left oophorectomy, total omentectomy, peritonectomy, bilateral pelvic paraaortic lymph node dissection (BPPALND), right hemicolectomy were performed. Postoperatively, the patient was shown as International Federation of Gynecology and Obstetrics (FIGO) Stage 3C. Six cycles of paclitaxel, carboplatin and bevacizumab chemotherapy was given to the patient. There was no evidence of relapse at the last control and her CA 125 value was 30 U/mL four months after surgery. The written informed consent was obtained from the patient.

CASE 2

A 77-year-old patient with two vaginal births was admitted to the gynecology clinic with abdominal swelling. Her last menstrual period was 25 years ago. She had no accompanying comorbidities. On her physical examination, abdominal ascites was detected. She had no adnexal mass on ultrasonographic examination. Ascites cytology was reported as malignant adenocarcinoma. Pap smear and endometrial biopsy results were negative for malignancy. There was no evidence of malignancy in endoscopy and colonoscopy examinations. CA 125 value was 40 U / mL. CT revealed peritoneal carcinomatosis and ascites also. The patient underwent total abdominal hysterectomy, BPPALND, total omentectomy, peritonectomy, subtotal colectomy, ileorectal anastomosis and protective ileostomy. Intraoperatively 6,000 mL ascites, approximetaly 20 cm sized omental cake invading the colon, pelvic peritoneal implants, and tumoral masses sized approximately 3 cm in bilateral adnexa were seen. Intraoperative pathology consultation of adnexa revealed an unspecified adenocarcinoma. In the postoperative period, the patient was under intensive care and discharged without any complications. The final pathology report was reported as HGSC originating from left fallopian tube. For carcinoma staging FIGO 3C, paclitaxel plus carboplatin chemotherapy was initiated. The patient who had received 6 cycles of chemotherapy did not have relapse and her last CA 125 value was 12 U / mL. The written informed consent was obtained from the patient.

DISCUSSION

PFTC is a very rare malignancy.[5] Most of the patients are in the postmenopausal period as in our cases. Clinical symptoms and signs of PFTC are not specific, our patients also applied with variant symptoms. Latzko's triad of symptoms, consisting of intermittent serosanguinous vaginal discharge, colicky pain relieved by discharge, and abdominal or pelvic mass has been reported in 15% of cases.[1] Because of the excessive secretion of carcinoma cells, tubal hydrops occurs and a mass may be palpated in gynecological examination. If this mass is vigorously pressed during pelvic examination, it is felt that the mass is gradually shrinking with excessive watery vaginal discharge. The same mass may not be palpated during follow-up examination. This condition is called "hydrops tubae profluence." However none of these symptoms were present in our patients. Although there are studies showing that Pap smear positivity can be detected in preoperative evaluation of patients with PFTC, the results of cervical cytology in our patients were negative for malignancy.[6]

On the other hand, serum tumor markers provide limited benefit for preoperative diagnosis. At the time of diagnosis CA 125 value was in normal limits in first case, while high in second case. CA 125 may be useful in evaluating the treatment response and the presence of recurrence.

The macroscopic appearance of the tumor resembles a simple inflammation in the early stages. The tube has become bloated. As the event pro-

gresses, it takes the appearance of a giant piyosalphinks. Although ultrasonography is a simple and first line imaging in evaluation, there were no adnexal masses both in our cases. Ultrasonography may be helpful for assessing ascites, as in the second case.

Microscopically the tumor is originated from the endosalpinx. The histological structure is typical for tubal mucosal epithelium. If the ovary is also involved, the primary OC should be carefully differentiated. The distinction between PFTC and OC is difficult because of the proximity of the organs, the similarity of tumor presentations and histologies. Histopathologically, Hu criteria modified by Sedlis are used in the diagnosis of tubal cancer.[7,8] According to these criteria; (a) if both the tuba and the ovary are involved with the tumor, most of the tumor should be tubal; (b) the tubal mucosa is retracted and has a papillary pattern; and (c) if the tubal wall is fully involved, there must be a transition between benign and malignant findings in the tubal epithelium. Otherwise recent studies suggest that ovarian, tubal and peritoneal HGSCs originate from the fallopian tube epithelium.[9]

Progression is most likely due to direct invasion from the tubal ostium. Usually epithelial OC, spreading as implantation into the peritoneal cavity, starts with the transcoelomic casting of the cells. In advanced stage cases, peritoneal cavity spread can occur and metastases are mostly seen in the ovaries, uterus and intestines. Fallopian tube cancer is also prone to lymph node metastasis, like OC. Patients with lymph node metastases have worse prognosis than patients without lymph nodes.[1,3]

As well as the histopathological similarities, treatment protocols of PFTC and OC are similar. Cytoreductive surgery is preferred in both diseases. Therefore in our cases colectomy was performed to achieve optimal debulking.

Adjuvant chemotherapy protocols for either PFTC and OC are platin-based. The overall response rate of platin-based chemotherapy in advanced stage tubal carcinomas ranges from 53 to 92%.[1] Gadducci et al. reported that in advanced stage patients treated with platin-based chemotherapy, the complete response rate was 64.4% and the incomplete response rate was 17.8%.[10] One of the factors determining the response of postoperative chemotherapy is the expansion of primary surgery. Gemignani et al. have treated Stage III and IV PFTC cases with platinum and paclitaxel combination and found that primary surgery was effective on survival. They reported a 3-year median disease-free survival in their study of 67% in the optimal debulking group and 45% in the suboptimal debulking group.[11]

In conclusion, PFTCs constitute less than 1% of genital cancers. For this reason, the number of patients in the majority of existing studies is insufficient. The diagnostic and treatment modalities of PFTCs are often based on OC studies, because their clinical behavior resembles OC. The residual tumor volume during surgery and stage are the most important prognostic factors in PFTC.

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Conflict of Interest

No conflicts of interest between the authors and / or family members of the scientific and medical committee members or members of the potential conflicts of interest, counseling, expertise, working conditions, share holding and similar situations in any firm.

Authorship Contributions

Idea/Concept: *Kadir Çetinkaya;* ***Design:*** *Nergis Ertürk;* ***Control/Supervision:*** *Ceval Atalay;* ***Data Collection and/or Processing:*** *Gözde Girgin;* ***Analysis and/or Interpretation:*** *Kadir Çetinkaya, Nergis Ertürk;* ***Literature Review:*** *Nergis Ertürk;* ***Writing the Article:*** *Nergis Ertürk, Kadir Çetinkaya;* ***Critical Review:*** *Ceval Atalay;* ***References and Fundings:*** *Ceval Atalay;* ***Materials:*** *Gözde Girgin.*

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