Huge Primary Fallopian Tube Carcinoma Synchronous with Epithelian Ovarian Cancer: Case Report

Epitelyal Over Karsinomuyla Senkronize Dev Primer Fallop Tüpü Karsinomu

Yılmaz DİKMEN,[a]
Volkan TURAN,[a]
Mustafa COŞAN TEREK,[a]
Osman ZEKİOĞLU[b]

Departments of
[a]Obstetrics and Gynecology,
[b]Pathology,
Ege University Faculty of Medicine, İzmir

Geliş Tarihi/*Received:* 21.02.2011
Kabul Tarihi/*Accepted:* 21.04.2011

Yazışma Adresi/*Correspondence:*
Volkan TURAN
Ege University Faculty of Medicine,
Department of Obstetrics and Gynecology,
İzmir,
TÜRKİYE/TURKEY
volkanturan@yahoo.com

ABSTRACT We present a rare case of a 55-year-old woman with coexistent adenocarcinoma of the ovary and the fallopian tube that admitted to the Department of Obstetrics and Gynecology with the complaints of abdominal distention and pain. She was assessed and after endometrial biopsy explorative surgery were performed, including pelvic tumor extirpation and staging procedures. Right salpingooferectomy specimen was measured 22 x 10 x 8 cm corresponding with primary fallopian tube carcinoma on gross examination. Primary fallopian tube serous adenocarcinoma synchronous with ovarian epitelial carcinoma (clear cell and endometrioid types) was revealed by microscopic histopathologic examination. Total abdominal hysterectomy, bilateral salpingooophorectomy, infracolic omentectomy and dissection of total pelvic paraaortic lymph nodes were performed. Six courses of carboplatine and taxol were decided by oncology council.

Key Words: Ovarian neoplasms; fallopian tubes

ÖZET 55 yaşında, karında yaygın distansiyon ve ağrı şikayetiyle Ege Üniversitesi Kadın Hastalıkları ve Doğum bölümüne refere edilen hastada, tümör belirteçleri, pelvik ultrason, magnetik rezonans görüntüleme ve endometriyal incelemeyi takiben yapılan operasyonda fallop tüpünden gelişen dev kitle saptandı. Operasyon sırasında sağ salpingooferektomi materyali 22 x 10 x 8 cm ile uyumlu tümöral kitle şeklinde bulundu ve mikroskopik histopatolojik inceleme sonrasında berrak hücreli ve endometrioid tip over karsinomlarıyla eş zamanlı gelişen primer fallopian tuba seröz adenokarsinomu olduğu saptandı. Hastaya abdominal total histerektomi, bilateral salpingooferektomi, infrakolik omentektomi ve total pelvik paraaortik lenf nodu diseksiyonu uygulandı. Hastaya 6 kür karboplatin ve taksol başlanması onkoloji konseyi tarafından kararlaştırıldı.

Anahtar Kelimeler: Over tümörleri; falloppio tüpleri

Turkiye Klinikleri J Gynecol Obst 2012;22(3):191-4

Primary fallopian tube carcinoma is rarely seen and accounts for nearly 1.5% of all female genital system malignancies.[1] Previous studies demonstrated that primary fallopian tube carcinoma is bilateral in 3-20% of cases.[2] It is suggested to be associated with chronic tubal inflammation, infertility, tuberculous salpingitis and tubal endometriosis.[3] Parity gives protection against this disease, as does a previous sterilization procedure and nulliparity is seen in 17-37% of cases.[4]

Histologically and clinically, primary fallopian tube carcinoma (PFTC) resembles epithelial ovarian cancer (EOC). Clinicians try to treat these two malignancies with the same modality because of the similarities in patho-

logical features and patterns of spread between EOC and PFTC.[5] However, these malignancies may be biologically distinct and may follow different clinical courses.

Approximately all primary fallopian tube tumors are adenocarcinomas, while other histologies are uncommon. Mixed mesodermal mullerian fallopian tube tumors are infrequent tumors of the female reproductive tract and recent studies reported that they account for 1-9.5% of all PFTCs.[6] Transitional cell carcinoma is found in 11% of PFTC and suggested to be associated with the fallopian tube serosa, which may prompt to nests of transitional cell epithelium.[4] Clear-cell carcinomas have accounted for 2% of the PFTC cases in a study[6] although they have consisted of 5% in another.[7] Alvarado-Cabrero et al.[8] have demonstrated in a series of 103 cases of fallopian tube carcinoma that the most prevailing histologic subtype was serous carcinoma (49.5%), followed by endometrioid carcinoma (25.2%), transitional cell carcinoma (11.7%), undifferentiated carcinoma (7.8%), mixed carcinoma (3.9%) and clear cell carcinoma (1.9%).

We present a rare case that primary fallopian tube serous adenocarcinoma synchronises with epitelial (clear cell and endometrioid types) ovarian carcinoma and the volume of the tumor is measured as 22 x 10 x 8 cm dimensions.

CASE REPORT

A 55-year-old, gravida 3, para 2 woman was admitted to the Department of Obstetrics and Gynecology with the complaint of abdominal distention and pain which had been ongoing for 3 months. Previous medical history and family history was unremarkable. Initial complete blood count, biochemistry, coagulation parameters and urinalysis were all within the normal ranges. A normal-sized uterus with an 3-mm bilayer thick endometrium was noted at transvaginal ultrasonography. Furthermore, a complex pelvic mass with a diameter of 214 x 95 mm, originating from the right adnex and pelvic ascite were explored with transabdominal ultrasonography. A diagnostic endometrial biopsy was performed, which revealed ischemic endometrium. Normal pelvic and para-aortic lymph nodes were noted in magnetic resonance imaging (MRI) of the pelvis and abdomen; pelvic mass was reported as mucinous ovarian carcinoma. The serum Ca125 level and Ca15-3 level were 1072 U/mL (normal range 0-35 U/mL), 332 U/mL (normal range 0-27 U/mL) respectively. Explorative laparotomy was performed following a midline vertical incision to assess pelvic pathology. Total abdominal hysterectomy, bilateral salpingooopherectomy, infracolic omentectomy, and complete pelvic-paraaortic lymphadenectomy were performed. Right salpingooopherectomy specimen was measured 22 x 10 x 8 cm corresponding with primary fallopian tube carcinoma on gross examination (Figure 1). No significant surgical or medical complication occured. Primary fallopian tube serous adenocarcinoma synchronous with ovarian epithelial carcinoma (clear cell and endometrioid types) was revealed by histopathologic examination. Due to pathological findings, six courses of Carboplatine 6 AUC and Taxol (175 mg/m^2) were decided.

DISCUSSION

The most prevailing symptoms with fallopian tube carcinoma are abdominal pain, abnormal vaginal discharge/bleeding and the most common finding is an adnexal mass. In many patients, fallopian tube carcinoma is asymptomatic. Benoit et al.[1] reported

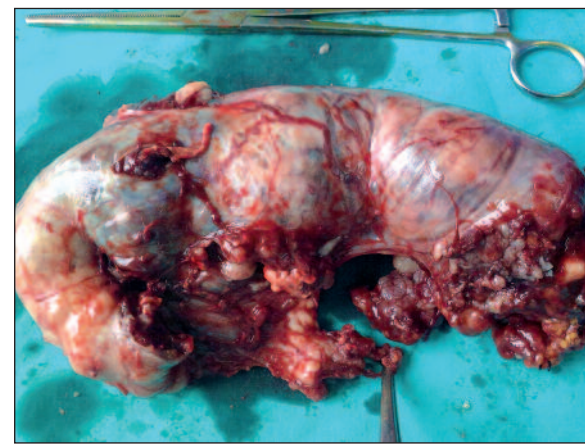

FIGURE 1: On gross examination primary fallopian tube carcinoma measurements were corresponding with 22x10x8 cm and coexistent with ovarian carcinoma.
(See for colored form http://jinekoloji.turkiyeklinikleri.com/)

the presenting signs and symptoms of PFTC as abdominal pain (47%), palpable mass (47%), vaginal bleeding (38%), bloating (31%), ascites (19%) and vaginal discharge (16%). Latzko[9] described the symptom complex of "hydrops tubae profluens"in 1916. This entity is triad of profuse watery vaginal discharge, colicky lower abdominal pain, and an adnexal mass.

The diagnosis of primary tubal cancer was first evaluated by Hu et al.[10] with some criterias. These criterias, modified by Sedlis[11] in 1978, mentioned that if the involvement of tumor attached tube and ovary together, the bulk of the tumor should be found in the tube. Also the tubal mucosa should be involved and papillary pattern should be revealed subsequent to microscopic histopathologic examination. In addition; the transition between benign and malignant tubal epithelium should be distinct and demonstrable.

Due to its rarity, preoperative diagnosis of primary fallopian tube carcinoma is rarely made. It is usually misdiagnosed as ovarian carcinoma (especially mucinous adenocarcinoma), tuboovarian abscess, ectopic pregnancy or colon pathologies.[12] Sonographic features of the tumor are non-specific including the presence of a heterogenous fluid-filled adnexial structure with a significant solid component, showing high vascularity; a sausage-shaped mass, a cystic mass with papillary projections within; an ovoid-shaped structure containing an incomplete separation. Pelvic ascites mostly accompanies these findings. The finding of a sausage shaped solid and/or cystic adnexal mass with papillary projections and low-impedance Doppler flow, described by Kurjak et al.[13] is suggestive of the diagnosis also. In the present case, on radiologic imagination fallopian tube carcinoma mimicked ovarian carcinoma and the most common appearance being a complex cystic adnexal mass, estimated as a mucinous ovarian carcinoma.

More than 80% of patients have elevated pretreatment serum Ca125 levels, which is useful in follow-up after the definite treatment. High levels of Ca125 do not support the possibility of metastatic formations.

Primary treatment of choice for fallopian tube carcinoma is surgery with total abdominal hysterectomy and bilateral salpingooophorectomy being the basic surgical procedure. However in order to determine the exact surgical stage, complete and accurate surgical staging is needed. It includes, in addition to total abdominal hysterectomy and bilateral salpingo-oophorectomy, peritoneal washings or collection of ascites if present, scrapings of the underfallopian surfaces of the diaphragm, infra-colic omentectomy and sampling of retroperitoneal lymph nodes. Intravenous taxol and cisplatin are the most common postoperative adjuvant chemotherapy as they are used in ovarian carcinoma.[14]

Salvador et al.[15] suggested that fallopian tube mucosal and ovarian tumors have similar genetic abnormalities in most cases so that they may indicate a monoclonality, originating either from the ovary, peritoneum or fallopian tube. Recent cytogenetic studies show the disease to be associated with over expression of p53, HER2/neu and c-myb.[16] There is also some evidence that BRCA1 and BRCA2 mutations have a role in tumorogenesis. Surgical staging, optimal cytoreduction, differentiation grade, pathologic type, lymph node status are important factors influencing the 5-year survival in primary fallopian tube carcinoma.[17] Published estimates of five-year survival for FIGO Stage III/IV disease range from 13.6 to 75% depending on the series.[1,4,8] Patients with PFTC are reported to have either BRCA1 or BRCA2 in approximately 11– 17% of cases.[18] Studies[19] found no significant difference in clinical parameters or survival between patients with PFTC or EOC when matched for stage, grade and histology.

Previous cancers are frequent among PFTC patients, especially breast cancer. Alvarado-Cabrero et al.[8] reported as 11% in the literature. Another study demonstrated a 5% rate of breast cancer in PFTC patients.[20] Benoit and Hannigan[1] reported metachronous and synchronous cancers, seen with PFTC. Breast cancer and endometrium cancer were found the most prevalent respectively. Second primary cancers after PFTC are also frequent, espe-

cially non-lymphoid leukemia, colorectal, breast, bladder and lung cancer.

In conclusion, fallopian tube carcinoma is rarely suspected preoperatively and involve a poor prognosis. In many patients, fallopian tube carcinoma is asymptomatic. The treatment approach is similar to that used for ovarian carcinoma and includes primary surgery. After total abdominal hysterectomy, bilateral salpingo-oophorectomy and staging procedures, postoperative adjuvant chemotherapy follows. Until more extensive clinical research has been performed, ovarian carcinoma management principles should be used in clinical practice. It is important to distinguish multipl primaries from metastatic lesions because they carry a different prognosis. These patients have been shown to have a more favorable outcome when compared to those with metastasis.

REFERENCES

1. Benoit MF, Hannigan EV. A 10-year review of primary fallopian tube cancer at a community hospital: a high association of synchronous and metachronous cancers. Int J Gynecol Cancer 2006;16(1):29-35.
2. Young RH, Scully RE. Pathology of epithelial tumors. Hematol Oncol Clin North Am 1992; 6(4):739-60.
3. Monge AH, Pineda RP, del Rocio Estrada Hernandez M, Juárez EG, García JC. [Fallopian tube primary invasive adenocarcinoma associated with acute inflammatory pelvic disease. Case report and literature review]. Ginecol Obstet Mex 2008;76(2):118-24.
4. Eddy GL, Copeland LJ, Gershenson DM, Atkinson EN, Wharton JT, Rutledge FN. Fallopian tube carcinoma. Obstet Gynecol 1984;64(4):546-52.
5. Pectasides D, Pectasides E, Economopoulos T. Fallopian tube carcinoma: a review. Oncologist 2006;11(8):902-12.
6. Horn LC, Werschnik C, Bilek K, Emmert C. Diagnosis and clinical management in malignant Müllerian tumors of the fallopian tube. A report of four cases and review of recent literature. Arch Gynecol Obstet 1996;258(1):47-53.
7. Hellström AC, Silfverswärd C, Nilsson B, Pettersson F. Carcinoma of the fallopian tube. A clinical and histopathologic review. The Radiumhemmet series. Int J Gynecol Cancer 1994;4(6):395-400.
8. Alvarado-Cabrero I, Young RH, Vamvakas EC, Scully RE. Carcinoma of the fallopian tube: a clinicopathological study of 105 cases with observations on staging and prognostic factors. Gynecol Oncol 1999;72(3):367-79.
9. Latzko W. [Left-sided tube carcinoma synchroneus with tubo-ovarian cyst carcinoma]. Aentralbl Gynak 1916;40:599.
10. Hu CY, Taymor ML, Hertig AT. Primary carcinoma of the fallopian tube. Am J Obstet Gynecol 1950;59(1):58-67.
11. Sedlis A. Carcinoma of the fallopian tube. Surg Clin North Am 1978;58(1):121-9.
12. Koçak M, Özdemir A, Kayıkçıoğlu F, Haberal A. [Primary fallopian tube carcinoma: 13 case]. Turkiye Klinikleri J Gynecol Obst 1998;8(1): 42-6.
13. Kurjak A, Kupesic S, Ilijas M, Sparac V, Kosuta D. Preoperative diagnosis of primary fallopian tube carcinoma. Gynecol Oncol 1998;68(1):29-34.
14. Yücesoy G, Göktan M, Çorakçı A, Vural B, Özeren S, Yücesoy İ, et al. [Primary carcinoma of the fallopian tube: a case report]. Turkiye Klinikleri J Gynecol Obst 2004;14(2): 117-9.
15. Salvador S, Rempel A, Soslow RA, Gilks B, Huntsman D, Miller D. Chromosomal instability in fallopian tube precursor lesions of serous carcinoma and frequent monoclonality of synchronous ovarian and fallopian tube mucosal serous carcinoma. Gynecol Oncol 2008; 110(3):408-17.
16. Mladenović-Segedi L. [Primary fallopian tube carcinoma]. Med Pregl 2009;62(1-2):31-6.
17. Büyükkurt S, Güzel AB, Altıntaş A, Vardar MA, Güleç ÜK, Kadayıfçı O. [Extraperitoneal metastasis of the fallopian tube cancer: a review of the literature]. Turkiye Klinikleri J Gynecol Obst 2010;20(1):35-43.
18. Rose PG, Shrigley R, Wiesner GL. Germline BRCA2 mutation in a patient with fallopian tube carcinoma: a case report. Gynecol Oncol 2000;77(2):319-20.
19. Dunn MS, Manahan KJ, Geisler JP. Primary carcinoma of the fallopian tube and epithelial ovarian carcinoma: a case-control analysis. J Reprod Med 2008;53(9):691-4.
20. Peters WA 3rd, Andersen WA, Hopkins MP, Kumar NB, Morley GW. Prognostic features of carcinoma of the fallopian tube. Obstet Gynecol 1988;71(5):757-62.